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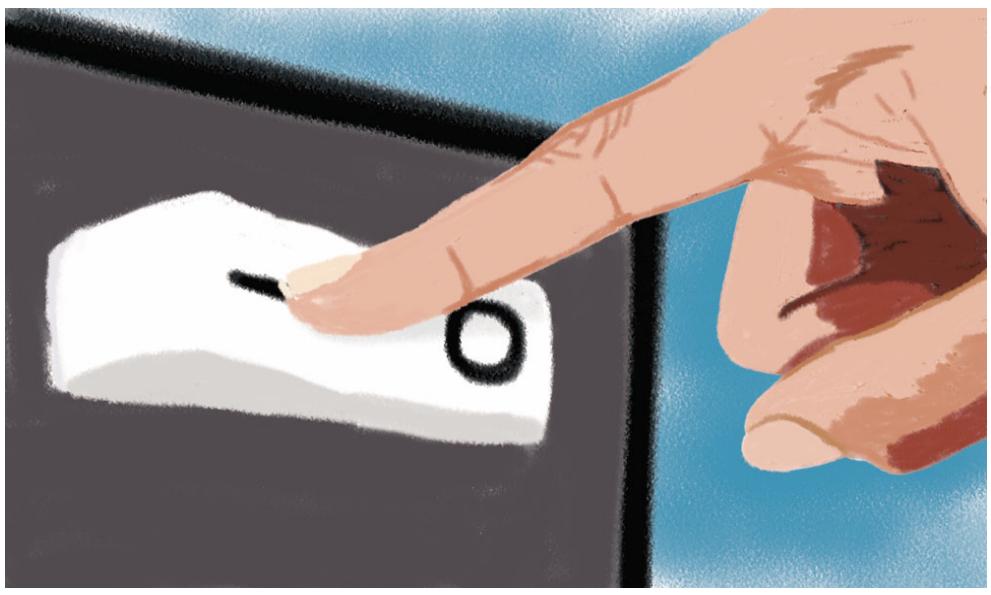
Power Play

Take A Proactive Approach Toward Keeping Power Costs In Check

by Elizabeth Millard

• • •

Many times, networks can be tweaked in their configurations, or vendors can be swapped for better deals, making for a better budgetary bottom line. But one constant in a data center that's tough to change is power usage—no matter which kind of equipment is implemented, chances are that it's not running on hand-crank power. Although it's difficult to make significant modifications to power usage, smaller shifts are possible, and those changes can add up to cost savings in the long run. Here are some tips for making sure you're powered up without breaking the bank.



Check Your Distribution

Unlike a building's major systems, where power distribution tends to be equal from room to room, a data center requires a more elaborate load balancing strategy with different phases of power distribution.

"Load balancing with traditional single phase power distribution is a cumbersome task which is often poorly managed," says Brad Wilson, spokesperson for Geist Manufacturing (www.geistmfg.com). Instead of thinking of a data center as a facility that needs as much power as it can get at all times, IT managers would be thinking about how much power is necessary at the cabinet level as well as the room level. In many cases, distribution can be balanced in each cabinet, which leads to inherent power balancing throughout the data center, Wilson says.

Take Control

Sometimes, the best way to control power is simply to turn it off. Switching off servers during nonpeak times can contribute to savings, and remotely managed power distribution units can be helpful in charting energy usage and helping data centers to scale back where necessary.

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Security Appliances For Your SME

Choosing Between Standalone & Unified Threat Management

by Chris Jackson

• • •

The security landscape is once again facing another transformation as threats to small to midsized enterprises increase in both number and complexity. For the IT manager seeking to provide suitable protection at a reasonable cost, the choice is now between standalone security appliances and UTM (unified threat management) devices. And both systems face increasing challenges as data transfer rates increase both internally and externally.

Security Appliance Origins

The prototypical standalone security appliance is your company's firewall, controlling access to your network's DMZ as well as limiting outbound traffic from your LAN. And although packet filtering firewalls perform an important role in protecting your corporate assets, the threat has changed to the application layer; now companies need spam filters, instant messaging filters, virus prevention, intrusion detection systems, and a host of other technologies to protect an increasingly vulnerable workforce.

These guardian systems have gone from hand-rolled systems to robust standalone appliances marketed and supported by major vendors. This has had a twofold effect: Devices are generally better designed and configured, and managing these devices has gone from being a black art to an everyday system your network or systems administrators can manage.

A Tapestry Of Systems

According to Stephen Pao, vice president of product management at Barracuda Networks (www.barracudanetworks.com)

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The choice is now between standalone or unified threat management devices.

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Cutting Costs

We cover some cost-saving ideas you may not have thought about.

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For the IT manager seeking to provide suitable protection at a reasonable cost, the choice is now between standalone security appliances and unified threat management devices.

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Server quietization is one of the key issues for small to midsized enterprises, and for the most part, the issue has become more noticeable in recent years.

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Data center managers are increasingly finding themselves responsible for maintaining building monitoring systems.

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■ **AdventNet** released an upgrade for ManageEngine EventLog Analyzer. ■ **Black Box** released the ServSwitch DTX, a next-generation ServSwitch KVM extender. ■ **Clearswift** unveiled the updated MIMEsweeper Web Appliance for improving content security. ■ **CommVault** says updates to its QiNetix data archiving software provide better retrieval capabilities for Outlook. ■ **Fujitsu** announced the Stylistic ST5111 and ST5112 Tablet PCs. ■ **Hitachi** released what it claims is the industry's first enterprise-class blade server. ■ **Novell's** ZENworks products include ITIL-based services and offer management tools for virtual machines and other IT resources. ■ **Reconnex** announced the iGuard 2600S with data-leak protection. ■ **Symantec** released Security Awareness Center, a subscription-based online training program. ■ **Unisys** announced new models of its ES7000/one Enterprise Server line to improve service quality in a virtualized computing environment.

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- DECEMBER -

ITC East
December 12-13
Harrisburg, Pa.
www.govresources.com

- JANUARY -

Storage Visions 2007 Conference
January 6-7
Las Vegas, Nev.
www.storagevisions.com

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WCA International Symposium & Business Expo
January 16-19
San Jose, Calif.
www.wcai.com

- FEBRUARY -

Gartner Wireless & Mobile Summit
February 5-7
Dallas, Texas
www.gartner.com/2_events/conferences/ra10.jsp

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RSA Conference
February 5-9
San Francisco, Calif.
www.rsaconference.com/2007/US

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SCALE 5x - 2007 Southern California Linux Expo
February 10-11
Los Angeles, Calif.
www.socallinuxexpo.org

- MARCH -

VoiceCon
March 5-8
Orlando, Fla.
www.voicecon.com

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Gartner Business Intelligence Summit
March 12-14
Chicago, Ill.
www.gartner.com/2_events/conferences/bi5.jsp

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TelecomNEXT
March 18-21
Las Vegas, Nev.
www.telecom-next.com

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Gartner Outsourcing Summit
March 19-21
Dallas, Texas
www.gartner.com/2_events/conferences/std10.jsp

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FOSE
March 20-22
Washington, D.C.
www.fose.com

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Data Center World
March 26-27
Las Vegas, Nev.
www.afcom.com

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RFID World
March 27-29
Dallas, Texas
www.shorecliffcommunications.com/rfid07

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MarketPlace NEWS



HP Faces Civil Suits

HP NOW FACES an expanded lawsuit filed by its shareholders and a possible civil suit from the state of California. The original shareholder lawsuit, filed in September, asked for punitive damages against HP CEO Mark Hurd, former HP Chairman Patricia Dunn, and other HP executives related to the money the company has lost because of the spying scandal. The expanded lawsuit accuses Hurd and other HP executives of insider stock trading for stock sales they made shortly before news of the spying scandal was made public. In related news, California Attorney General Bill Lockyer says his office is gathering evidence about damage caused to the people HP investigators spied on and, depending on what it finds, will consider filing its own civil suit.

Microsoft Confident About Vista

WINDOWS VISTA'S business upgrade cycle will be stronger and faster than Windows XP's, according to Microsoft CEO Steve Ballmer. Ballmer made the prediction during the global launch event for the business versions of Vista, which was in New York. He says the new features in Vista and Office 2007, including improved security and search methods, mean "many businesses will deploy out of the shoot." Not all Vista adoption rate predictions are as rosy, however. Info-Tech Research Group, for example, advises enterprises to adopt a "wait and see" approach and potentially hold out for Service Pack 1, due in the third quarter of next year, before widespread deployment.

HP Leading PC Seller

IN THE THIRD QUARTER, PC maker HP has claimed the top spot over Dell as the leader in worldwide PC shipments. According to industry analysts, HP's steady climb during the past few years has a lot to do with controversial moves made by former CEO Carly Fiorina, including the acquisition of Compaq Computer, which contributed to her firing. iSuppli, a market-share analyst firm, recently released figures that put HP up 16.7% from Q3 last year with a reported 9.9 million PCs shipped. The increase was well above the overall PC market's increase of 9.5%. The industry's previous leader, Dell, saw a 1.9% decline in shipments from last quarter, down to 9.8 million units.

Microsoft Meets EU Deadline

DESPITE EUROPEAN UNION Commissioner Neelie Kroes' warnings of $3.9 million-per-day fines if it missed the deadline, Microsoft did meet the Nov. 23 deadline for turning in its revisions for technical documentation on its communications protocols. Microsoft's troubles stem from a March 2004 antitrust ruling; the EU commission said Microsoft must make available to its competitors technical documentation so they could develop products that would work with Windows PCs and servers. The commission fined the software giant $357 million in July for not complying with that ruling. Now that Microsoft has turned in its revisions, the EU Competition Commission will examine the documents, and if it finds them lacking, may fine Microsoft again.

Government Warns Of Possible Cyberattack

THE DEPARTMENT of Homeland Security has received an alert discussing plans for an al Qaida-related cyberattack on online financial sites. The threat, reportedly intended as revenge for "Muslim brothers in the crusaders' Guantanamo prison camp," called for attacks to be conducted throughout December. While the threat has been received by Homeland Security, authorities contend there's no reason yet to believe the threat is credible.

Microsoft Open To Open-Source Deals

IN NOVEMBER, Microsoft and Novell entered a series of business and technological agreements to make their products work together for corporate customers who use Linux and Windows servers. As part of the deal, Microsoft will make an upfront payment of $348 million to Novell. And according to Microsoft, the company is open to additional deals similar to the Novell agreement. According to Microsoft's Steve Ballmer in an interview with India's *Economic Times*, "We will love to put that kind of agreement in place with anyone who distributes Linux software—Red Hat, whoever else."

Palm Earnings To Fall Short

ACCORDING TO HANDHELD MAKER Palm, delays in U.S. certification for its new Treo will affect its current-quarter sales and profits. Those numbers, according to the company, will fall short of previous estimates. Palm currently expects its second fiscal quarter revenue to fall somewhere between $390 million and $395 million, while estimates provided Sept. 1 were at $430 million to $450 million. While earnings were estimated to be between 15 cents and 18 cents per share, the company is now saying they will be between 10 cents and 11 cents per share. The Palm Treo 750 is expected to begin shipping in the United States early next quarter, which will be the company's third fiscal quarter.

EC Urges Countries To Fight Spam

THE EUROPEAN COMMISSION released a statement encouraging national authorities such as companies, ISPs, and governments to do more in combating spam, including phishing attacks, and malicious software, such as keyloggers and spyware. Although certain legislative measures are already in place to fight these online threats, enforcement is difficult. Therefore, it's asking online businesses to make sure their practices comply with laws protecting data, and it wants Internet service providers to use the appropriate filtering policies for their customers. In addition, the commission is urging governments to establish specific responsibilities for using the tools currently in place and has asked police forces to work together in cross-border collaborations in fighting these threats.

Buyers Switching Notebooks

IN THE WAKE OF THE RECENT notebook battery recalls, IT managers have not slowed their purchase of new notebooks. But they are more likely to switch notebook brands than before, according to a new IDC report. Since August, about 9.6 million batteries have been recalled from manufacturers such as Dell, Lenovo, and Toshiba. According to the study, 15% of buyers say they will alter their buying because of the recall, which IDC says is enough to sway market share.

Update To Windows Genuine Advantage

DURING THE UPCOMING MONTHS, Microsoft will roll out an updated version of WGA (Windows Genuine Advantage) Notifications, its antipiracy tools for WinXP. The changes come as the result of criticism the company has received about WGA since its release in July 2005. Included in the changes are an installation wizard and instant display of the validation results after installation. Microsoft has also added an "indeterminate" category and access to troubleshooting for users who have difficulty validating their OSes. Updates will be available every three to four months, according to Microsoft.

Gates Foundation Giving Tech Grants

THE BILL AND MELINDA Gates Foundation has pledged a total of $328 million in individual grants for developing countries to help bridge the digital divide. The grants are intended for developing nations to use to offer people access to computers and the Internet at local public libraries, and some of the investment will also be used to create IT training programs. The first three countries to benefit from the fund are Latvia, Lithuania, and Botswana, and the remaining monies are set aside for 12 to 15 other countries to receive grants in the next seven years.

Government Greenhouse Mandates

AS COUNTRIES ARE PAYING more attention to the world's climate changes and what causes them, the U.S. Supreme Court is examining whether the United States should put mandates in place to lower the amount of carbon dioxide in the atmosphere. Specifically, the Supreme Court will decide if the Environmental Protection Agency should regulate carbon dioxide emissions. The possible regulatory measures could include a "carbon tax" that companies would pay, or a "cap and trade" system, which the U.S. already uses for other gas emissions, where organizations would be given a certain allocation of units of carbon dioxide emissions, and if they exceed their limit, they would purchase more units in carbon markets.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	Nov. 27 $	Dec. 4 $	% change from previous week
Avaya	AV	$11.92	$12.47	$12.69	▲ 1.76%
BEA Systems	BEAS	$8.77	$13.58	$14.01	▲ 3.17%
Computer Associates	CA	$28.51	$21.99	$21.94	▼ 0.23%
Cisco Systems	CSCO	$17.54	$25.80	$27.25	▲ 5.62%
Dell	DELL	$30.15	$27.01	$26.84	▼ 0.63%
Electronic Data Systems	EDS	$23.05	$26.75	$27.07	▲ 1.2%
Google	GOOG	$404.91	$484.75	$484.85	▲ 0.02%
HP	HPQ	$29.67	$38.64	$39.86	▲ 3.16%
IBM	IBM	$88.90	$91.45	$93.51	▲ 2.25%
Intel	INTC	$26.68	$21.02	$21.22	▲ 0.95%
McAfee	MFE	$27.81	$28.29	$29.51	▲ 4.31%
Microsoft	MSFT	$27.68	$29.48	$29.33	▼ 0.51%
Oracle	ORCL	$12.60	$18.92	$19.28	▲ 1.9%
Red Hat Software	RHAT	$23.57	$16.98	$17.13	▲ 0.88%
Sun Microsystems	SUNW	$3.77	$5.36	$5.65	▲ 5.41%
Symantec	SYMC	$17.61	$20.67	$21.15	▲ 2.32%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

BUYERS' GUIDE
MARKET WATCH

Cable Management Software

Software To Help Untangle The Cabling Mess

by Sixto Ortiz Jr.

• • •

If there is one constant in modern data centers, it's cabling. Cabling is the primary physical layer, the actual conduit through which data flows. There's not much to cabling; you simply lay it out and let it do its thing. Simple enough, at least until things go wrong, and it's time to trace a difficult problem through miles of tangled cabling.

Thankfully for admins, there are infrastructure management applications designed to map out data center cabling routing and give them a visual representation of how cabling is physically laid out.

The Cabling Marketplace

In a recent market research report ("Data Center Cabling Systems Market"), Frank Murawski, president of market research firm FTM Consulting (www.ftmconsulting inc.com), which specializes in the structured cabling systems marketplace, points to the April 2005 release of the TIA/EIA-942 cabling standard as one of the drivers for market growth in the structured cabling systems marketplace.

According to Murawski's findings, the release of this cabling standard is driving growth in new data center installations as well as the retrofitting of existing data centers to accommodate the requirements of the new standard.

Also, Murawski's research reveals, copper cabling will remain the largest segment in the cabling marketplace through 2011: At that time, copper cabling shipments will total $1.518 billion, while fiber cabling shipments will total $716.8 million, or approximately half copper cabling's market size.

Cable Management Apps

Your view of the data center infrastructure should not be limited to a fearsome-looking rat's nest of tangled cables. These applications can bring clarity to your data center physical infrastructure and help with the overall management of this important asset.

UltiCAM Cable Management System

The UltiCAM cable management system software is a one-stop shop for the documentation and management of all kinds of assets, from cabling to circuits, pathways, and connectivity. According to the company, the software can be used to document and manage the circuits and physical connectivity for all types of networks, including ATM, Ethernet, fiber, voice, and FDDI.

The database can be used to store physical asset information for multiple buildings or even campuses; views can be customized to display assets by floor, closets, or zones. Also, the software can be configured to provide for the recording and management of other physical assets, such as water and electrical systems. Organization is done using four major categories within the database: Equipment, Cables, Pathways, and Assets.

SnapShot

UltiCAM Cable Management System

Flexible app that can document and track other assets beyond the data center

www.Processor.com/Ulticam

UltiCAM can be used to track ongoing work and maintenance done on your physical infrastructure via its integrated Service Desk function. Finally, the software works with Visio Technical by implementing an interface between items stored in the database and the Visio SmartShapes (www.microsoft .com) used to render diagrams. This feature allows technicians to take AutoCAD drawings and work with them within Visio.

iTRACS Physical Layer Manager Enterprise Edition

The iTRACS Physical Layer Manager application provides admins with an array of control and monitoring options over physical assets. For example, it uses a database for discovering, mapping, documenting, and reporting on the status of various network assets. But, there is a caveat: The company advises that physical location information about existing assets is "greatly enhanced" by the use of hardware that provides real-time information about network assets.

Features include real-time detection of unauthorized changes and intrusions, auto-discovery of connected devices, auto-routing for displaying optimum network routes, visual representation of the network as physically laid out, and change control features for management of change and work orders.

Other notable features include the availability of more than 60 preconfigured reports, event monitoring and logging, import of spreadsheet data, support for AutoCAD file formats, and automatic notification of work orders for technicians. The software can also be extended via the addition of three optional modules: iTRACS iDiscover (for self discovery of device physical location), iTRACS iLogin (for monitoring event logs), and iTRACS iPBX (for management of voice assets).

SnapShot

iTRACS Physical Layer Manager Enterprise Edition

Enables cabling and asset management in all kinds of networks and extensible via various modules

www.Processor.com/Itracs

HP OpenView AssetCenter Cable Management

HP is one of the premier suppliers to the data center industry. The company's OpenView AssetCenter Cable Management software extends the capabilities of the HP OpenView AssetCenter by allowing the collection and management of information about a data center's cabling and circuits.

According to the company, the software manages all aspects of the cabling/physical infrastructure, including IP and MAC addresses, port types, and communications ports and cross-connects. An interesting feature of the application is the ability to integrate financial and contractual information associated with the infrastructure assets the software is designed to track.

For example, in cases where specific network assets are leased, OpenView not only shows the physical information about those assets but also the contractual and financial details behind them (such as payments and due dates). In fact, the application integrates with HP's own OpenView AssetCenter Financial Management application.

The software also supports some of the principal CAD applications, including AutoCAD and MicroStation. This compatibility with those applications allows for the graphical display of infrastructure information.

As with other programs in this roundup, OpenView AssetCenter Cable Management provides a system for simplifying the management of the data center move, add, and change process and for ensuring that changes are immediately captured and the data repository is up-to-date. The application uses a number of wizards to perform various tasks, including creating connections, moving or replacing assets, generating work orders, etc.

SnapShot

HP OpenView AssetCenter Cable Management

Part of HP's suite of OpenView management solutions

www.Processor.com/OpenView

Brady NetDoc Documentation & Cable Management Software

According to the company, Brady's NetDoc Documentation and Cable Management software is a database-driven, Web-enabled application that documents and manages horizontal and backbone cables, hardware, assets, pathways, locations, contacts, and other details about your physical infrastructure.

NetDoc is ANSI/TIA/EIA-606A compliant and integrates with Brady's LabelMark Labeling Software, so the preparation of labels to visually identify cabling assets in the field is straightforward. The database stamps all notes captured during documentation efforts with user and date information and features customizable fields, so the program's easy-to-use interface can be changed to meet a variety of unique needs.

NetDoc uses wizards to perform documentation tasks and also features the capability to import spreadsheet data into its database. In addition, NetDoc can also import cabling test results and attach a variety of digital formats for enhanced documentation, including AutoCAD, digital photos, and PDFs.

If you don't need to use certain features within the NetDoc software, those can be easily disabled to let you focus solely on the features that make sense for your business.

SnapShot

Brady NetDoc Documentation and Cable Management Software

Tracking made easy and flexible, plus integration with Brady labeling system

www.Processor.com/NetDoc

Cormant Technologies CableSolve R5

Cormant's CableSolve R5 is a physical network layer management application based on the Microsoft .Net framework that also works with Pocket PCs. According to Cormant, the advantage here is that users and administrators can access all of the information available through the software's server and desktop versions using a Pocket PC. Better yet, the Pocket PC application can be used in the field to make changes that are then automatically added to the main database.

Other features include wizards and templates to ease data entry and updating tasks, compatibility with barcoding applications for easy retrieval of asset information in the field, compatibility with Visio and CAD, work order management using Pocket PCs, compliance with ANSI/TIA/EIA-568B, ISO/IEC 11801, CENELEC EN 50173 specifications, etc.

CableSolve automatically retrieves connectivity changes from network switches, detects new equipment when added or removed, provides automatic alerts when software or software components are inserted or removed, and uses SNMP to automatically update asset location. Network visualization features include asset location and ports on floor plans viewable via the desktop or handheld interface, automatic floor plan updates when assets are moved, and integration with both Visio and Excel.

CableSolve's portability makes the software ideal for infrastructure auditing on the field; for example, barcoding can be used to scan components, verify location details, and issue discrepancy reports that highlight whenever database entries differ from actual physical locations. In addition, CableSolve includes a work order management system that, for example, allows for work orders created on the desktop to be ported to Pocket PC devices for easy execution in the field.

SnapShot

Cormant Technologies CableSolve R5

Full-featured cabling and asset management app also featuring Pocket PC portability

www.cormant.com

Consider Your Options

The applications featured here, in general, all perform the same basic functions by providing a graphical view of a data center's physical infrastructure and a way to manage the MAC (moves, adds, and changes) process that data centers must stay on top of if they expect to maintain an accurate picture of their physical infrastructure assets. Still, prospective buyers should carefully examine each application to ensure it makes sense for their particular environment.

Buying Tips

Ensure equipment compatibility. A cabling/infrastructure management application should be fully compatible with all of your networking equipment. That's the best way to ensure all features work as advertised.

Standards compatibility. Make sure whatever application you purchase is also compatible with whatever TIA, ANSI, or ISO specifications that make sense for your business.

Watch the GUI. You'll be spending a lot of time using a cabling/infrastructure management application's GUI, both at the beginning and as you use the software. Make sure the interface is straightforward and fairly simple to use.

Add the CAD. Most of the floor layout documentation gets done in CAD; make sure whatever app you buy plays nice with your favorite CAD application.

Standardized database. A database design that's ODBC-compliant will integrate well with other applications—such as Excel—and make reporting and data management easier.

Portability is key. Cormant CableSolve's portability feature is compelling; being able to take this information in the field could pay significant dividends in terms of time savings.

To see *Processor* Showcase ads for products in this category, look online at www.Processor .com and find the Cable Management ads under Software/Physical Infrastructure.

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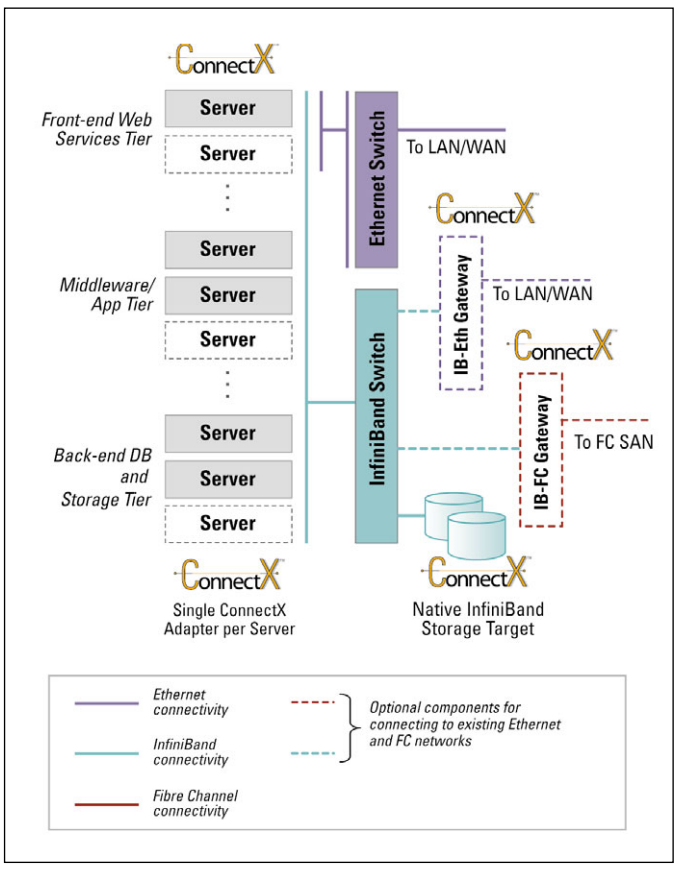
Improved Connectivity For Servers & Storage

Mellanox Introduces 4th-Generation InfiniBand Architecture

THE GROWING DEMAND for better application performance is driving the increased adoption of clustered servers and server virtualization on top of multicore processors. But connecting these servers in a way that maximizes their performance poses I/O connectivity challenges. Many current solutions are inadequate for the demands of tomorrow's server and storage networks.

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The ConnectX architecture enables integration of extraordinary levels of functionality into a single adapter chip. It supports eight lane PCI Express v1.1 and v2.0 interfaces as the host interface. For network and storage connectivity, it supports two network ports, and each port can be flexibly configured as either a 4X InfiniBand port or a 10 Gigabit Ethernet XAUI/CX4 or XFI port. The InfiniBand port supports single, double, and quad data rates (SDR, DDR, and QDR) delivering 10, 20, and, eventually, 40Gbps full duplex bandwidth.



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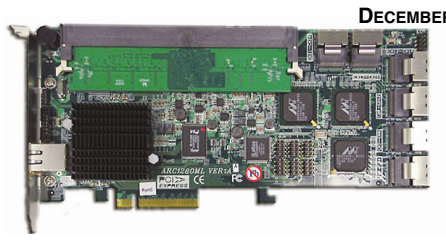
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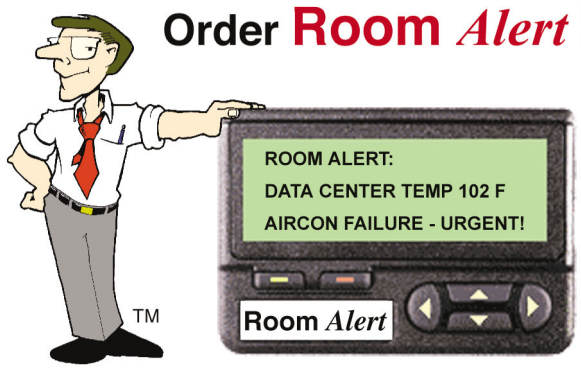
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Cutting Cooling Costs

Don't Let Your Cooling Infrastructure Burn Your Budget

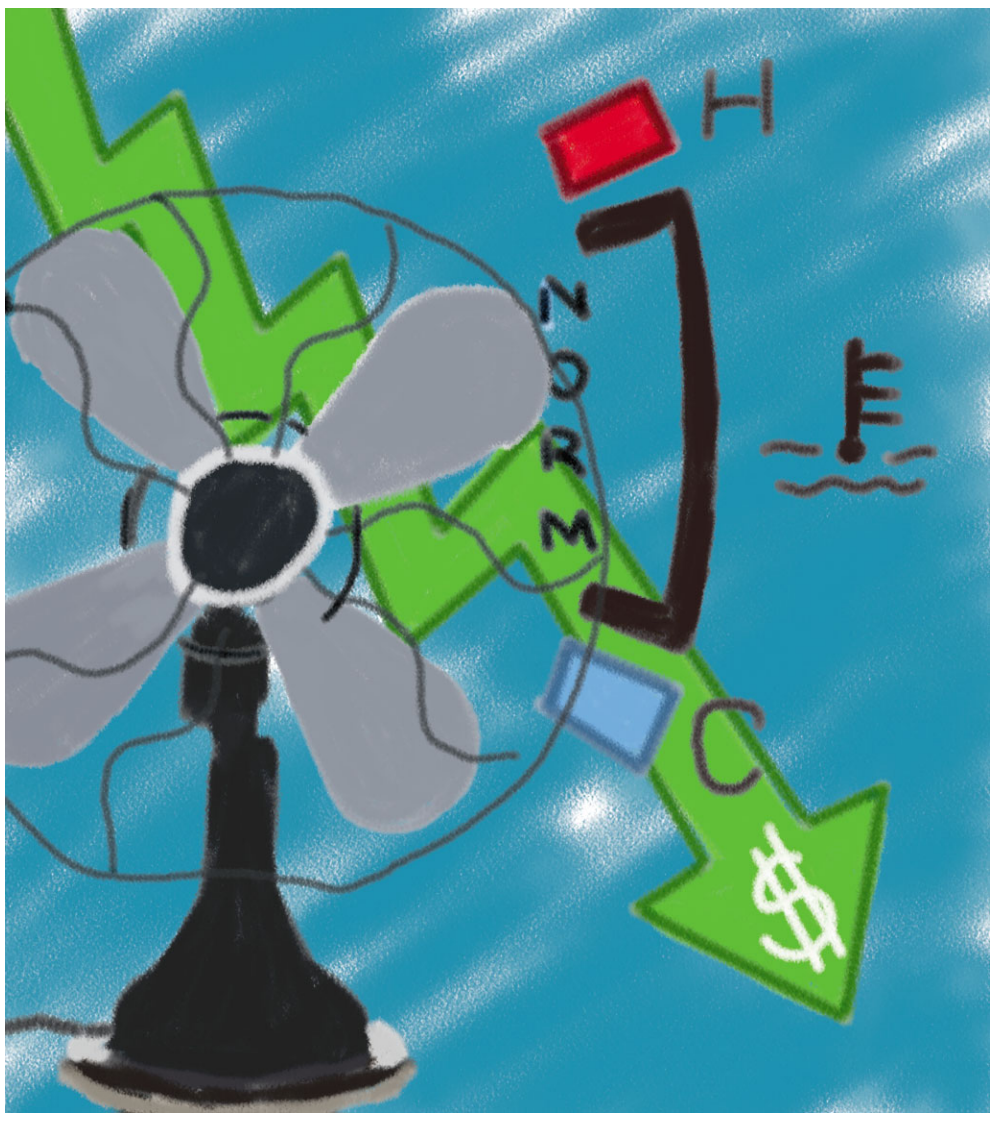
by Christian Perry

• • •

The challenge of cooling a data center might seem insurmountable to some, but companies that do manage to rise and meet that challenge inevitably face another problem: how to pay for that cooling. An effective cooling infrastructure keeps equipment at safe temperature levels, but it also introduces hefty costs that can quickly drive down the return on investment.

"The biggest expense is the cost of electricity to run the machines in the first place," says Gregory Toto, vice president of product management at BigFix (www.bigfix.com), a provider of security configuration management solutions. "Consuming electricity, of course, generates heat that costs yet more money to remove with air conditioning—so you're paying double for every watt you consume."

Using the rule of thumb that it takes a watt to cool a watt, the utility cost associated with the cooling system for a 500kW data center is more than $300,000 per year, according to Marty Kulinski, director of technology and security for Infocrossing (www.infocrossing.com), a provider of selective IT outsourcing solutions. Factor in potentially rising utility rates and inefficient, ineffective cooling systems, and that operating cost can reach even higher levels. Further, the energy expenses are just part of the equation because companies often face huge expenditures when replacing aging cooling equipment or attempting to increase cooling power.



Do The Design

The news isn't all bad because it's possible to reduce cooling-related costs without losing cooling effectiveness and efficiency. In fact, by improving those factors, companies can in turn cut cooling costs.

"It all starts in the design phase, with determining which cooling system is the

Go to Page 10

Three More Ways To Save Money

If you're seeing imaginary dollar signs flowing from your cooling vents, consider implementing these additional tips, courtesy of Infocrossing's Marty Kulinski (www.infocrossing.com).

- Use virtualization software and hardware to stack virtual machines or virtual hosts onto fewer and fewer physical servers.
- Processor manufacturers are finally taking processor consumption seriously and, for the first time in processor history, are producing more powerful processors that draw less power than their predecessors. Start deploying systems that use these new technologies.
- Relocate equipment into managed data centers or less critical equipment into collocation hotels and leverage the cooling expertise at those facilities.

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Do Vendors Equal Cost Savings?

Simple Savings Strategies That You May Not Consider

by Chris A. MacKinnon

• • •



So the corporation wants to cut more IT costs. Or perhaps as an IT manager, you are looking for ways to increase funding. You've squeezed everything out of price-comparison Web sites, so where can you turn? For starters, you can talk with people such as Gartner analyst Leslie Fiering, who can guide you to consider saving money in areas that you otherwise might consider a waste of time.

To find out where the budget is, however, you first need an understanding of where your money is and where you want it to go. Darin Stahl, lead research analyst with Info-Tech Research Group, says IT benefits to the business accrue not in proportion to the amount spent on IT but according to what the money actually buys and how the data services are managed. (*Disclaimer: Info-Tech analysts write a regular column for* Processor.) Stahl says, "We find that 65% of the IT budget is allocated to operations management and maintenance, 25% to migrations and upgrades, and 10% to innovations and new functions."

So it's about what your money actually buys. What about the money that you spend on vendor relationships? Sometimes vendors are merely used as a means to a lower dollar, but, according to Fiering, IT managers can benefit financially from being more frugal in their spending related to vendor relationships. She says while there are a number of specific tactics that you can use to improve pricing, there are two strategic things to keep in mind when it comes to dealing with vendors.

Strategy One

Fiering says the first strategy is to absolutely understand what your requirements are up front. She says, "This includes hardware and life cycle services, the way you want to do business with the vendor, the speed in which you need the system delivered, and the predictability of the systems you are ordering." Fiering says you need to understand what your users are going to need and in turn, specify that plainly to the vendor, who will have a better understanding of what you need. This way, you don't wind up making extensive changes later.

"The other thing about understanding your requirements," Fiering says, "is when it comes to life cycle services, you may find that the vendor can supply certain things less expensively than your own IT department. This would include things like systems or creating or installing system images on each system you buy. On the other hand, there may be services you can do in-house so that you can decline the vendor offerings."

Fiering says the real point is if you really understand your requirements in terms of service-level agreements, services that you are going to require, and the level of hardware you require, then you get exactly what you need. "Under buying means you will make extensive corrections later; and over buying, well clearly, it's obvious what happens there."

Strategy Two

The second strategy, according to Fiering, involves looking at the total deal. This is not the total cost of ownership, she says, which is a whole other issue, but the total deal. She comments, "I get purchasing agents who call and talk to me about negotiating, and the only thing they think about is price, price, price, and I say 'What about shipping?' You may find that shipping is much more expensive. In fact, if you add up everything, you pay more, and these purchasing agents ask 'But who has the cheapest price?' So pay attention to the whole deal. If you are going to do things like asset tagging and image installation, you need to look at the total ticket on that, and not just the hardware."

In Fiering's opinion, you see a lot of vendors who understand how to play this game. They will come in at a very low cost on the hardware and then take it back on the other side. She notes, "Shipping should be $25 to $35 a system; I've seen it anywhere from $75 to $85 a system. Sure, you save $25 on the hardware, but you wind up overspending by $50 on the shipping." Fiering says this sort of thing is very common.

Fiering says you also need to look at the total portfolio. She explains, "If you are buying PCs and notebooks, but your company and other divisions are buying servers and consulting other services, you need to remind your sales person that this is part of the bigger buy. There's more at stake than just this one buy, and yet, you need to be considered in terms of the whole portfolio. Clearly, the sales person would rather isolate you as a single deal and have you think of yourself as a single deal, so that they can make more margin out of it. But again, if you are part of a larger portfolio buy, it does give you more leverage."

The Easiest Way To Save Money

When it comes to saving money using your vendor relationships, Gartner analyst Leslie Fiering says sharpening your pencil is the first thing you need to do.

Fiering says, "Do your homework and be diligent. We live in the day of the Web, where it is possible to check prices. Granted, what you are going to see on the Web are going to be quantity-one, and you may be buying at a discount, but at least you get to see relative pricing and see what the deals are out in the marketplace. This is fairly easy to do, so it's worth checking, particularly if the vendor is offering you a discount off the Web price. Then you can go around and do an informal check. You don't have to go into great detail, but you do need to recognize that the price of hardware drops at a fairly steady rate over the life of a given model, so you need to have a pricing mechanism that will follow the price drops because a lot of vendors are only too happy to give you a low price today and then not change the price throughout the life of the model. Then lo and behold, at the end of four or five months, you are overpaying significantly."

Power Management
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November 10, 2006



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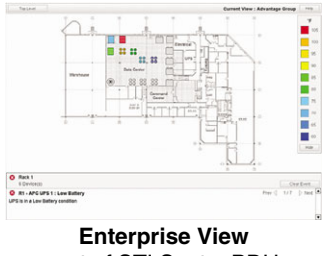
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Cutting Cooling Costs

Continued from Page 8

most efficient for your application," Kulinski says. "Highly efficient cooling systems, such as a chilled water system, are more expensive from a CAPEX [capital expenditure] perspective. This cost can be more than recovered over the life of the system, as it will drive down the OPEX [operating expenditure] costs via lower utility bills. However, it may be more efficient to install a DX [direct expansion] cooling system, as the expected OPEX savings do not justify the higher CAPEX costs." A DX cooling system, Kulinski explains, uses air to directly cool the unit's refrigerant instead of another form of convection system, such as chilled water or glycol.

Kulinski recommends that the data center design includes plans for upgrading both capacity and redundancy, and areas should be designated for high-, medium-, and low-power densities with appropriate cooling designs to match those areas. Planning for the appropriate thermal load is key.

"Too often in SMB companies, there is only consideration for the feeds and speeds. Then the servers or racks are shoved in a closet with little ventilation," says Geoff Lyon, CEO of CoolIT Systems (www.coolitsystems.com). "Although it's not often talked about, there are tons of companies doing this because it's literally the only space available. The cost implications for this are huge and mostly a result of the hardware overheating and failing."

When buying cooling equipment, experts recommend units that can adequately handle the heat output of the equipment in the data center. "Some people will try to buy the smallest cooling system possible," explains Clark Michel of Atlas Sales & Rentals (www.atlassales.com). "The smaller-capacity unit will just run longer—costing more—and burn out sooner and probably not handle the load on hot days."

Target The Heat

Like a heat-seeking missile that goes wayward, cooling systems that can't properly target heat sources end up costing companies thousands of dollars in unused cooling. Companies can do well to locate the sources of heat that are creating the cooling load in the first place, according to Joe Loper, vice president of research and analysis with Alliance to Save Energy, a nonprofit that promotes energy efficiency.

"Most of the energy that goes into servers and ancillary equipment ends up as waste heat that then must be managed by cooling systems," Loper says. "Waste heat comes from processors, power supplies, power distribution equipment, and lighting. Dual-core processors, 80 PLUS power supplies, and DC power distribution can all reduce cooling loads at lower cost than shedding the heat."

Like a heat-seeking missile that goes wayward, cooling systems that can't properly target heat sources end up costing companies thousands of dollars in unused cooling.

For heat sources that can't be physically eliminated, companies should ensure that all available cold air is being delivered to those sources. Kulinksi says that perforated tiles should be placed only in cold aisles or at the suction side of equipment, and all floor penetrations should be sealed. Further, obstructions to airflow and cooling shorts should be eliminated; the amount of materials in raised floors should be reduced; cabling for power and data should be routed above the cabinets; and the front and rear doors of cabinets should be removed, or screen doors should be used instead of solid doors with louvers stamped into them.

Confused? Seek Help

According to Toto, it's imperative that companies integrate and consolidate power management with other essential system management tasks, such as software updating, patching, inventory assessment and management, and others.

"This gives a best-of-worlds benefit of power conservation without compromising ability to perform system management work," Toto says. "It's also always good practice to consolidate as many management functions as possible on as few management tools as possible to save money, reduce the slope of staff learning curves, and reduce tool clutter in data centers and endpoint devices."

Still, if the idea of cutting cooling costs sounds great in theory but impossible in practice, there's plenty of help out there. Kulinski notes that professional organizations such as AFCOM and The Uptime Institute are well-versed in efficient, cost-effective methods for running data centers, thanks to their close relationships with computer manufacturers and electrical and mechanical systems manufacturers.

According to Loper, companies that offer data center services are similarly effective outlets for tackling high cooling costs. "As part of their core business mission, they may be more aware of the many best practices in data center design, at least compared to the typical medium and small data center operator, who is already fully employed trying to keep up with rapid and unpredictable applications growth," Loper says. "And some server vendors are having to become 'air-cooling specialists' in response to high cooling costs—they can be a resource, as well."

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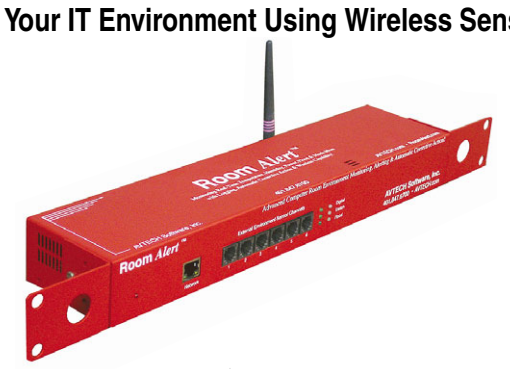
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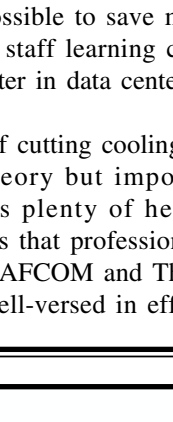
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Manage Your Assets, Manage Your Budget

Equipment Life Cycle Tips From The Pros

by David Garrett

• • •



JUST LIKE HUMANS, servers, notebooks, and printers grow old and die. But you can maximize their useful life to save money—and believe it or not, simply using them longer may not be the best way.

"Holding on to old equipment can appear to reduce IT spending," says Darin Stahl of the Info-Tech Research Group, "but doing so may actually cost you more money in the long run." (*Disclaimer: Info-Tech analysts write a regular column for* Processor.) He notes that increased support costs, upgrades, replacement parts, and downtime will drain dollars from your budget. And there are other, subtler costs to keeping equipment longer than you should.

First among these is the cost of making new software play with old hardware. "Consider the delay that this could create for project implementation and the costs associated with stretching project timelines and paying idle project members," says Stahl.

So how do you maximize your equipment's life cycle, the better to minimize your budget? We've gathered some expert tips below.

Start With A Plan

Gartner analyst Patricia Adams believes that small to midsized companies should manage their equipment's life cycle with a careful, well-conceived plan, one that covers each stage in the process: requisition, approval, and acquisition; receipt and verification; deployment and management; reuse or retirement; and end-of-life and disposal.

"By developing a master plan for how and what will happen to an asset throughout its life cycle," says Adams, "these processes will improve IT costs, customer satisfaction, and also improve business performance as a result of that."

A good plan can help you avoid costly errors such as unused warranties. "If you order a PC and it sits in a warehouse or a stockroom for three months, instead of using that for four years, you're actually ending up using that for three years and nine months because the warranty has been in effect," says Adams. As a best practice, she recommends that companies track assets from the moment they're requisitioned.

Avoid Support Problems

According to Info-Tech's Stahl, old hardware is a risk if the vendor or manufacturer no longer supports it. He suggests you act now to avoid problems. "As a start, get all the documentation possible for older systems and the associated procedures," he says. "Don't rely on the legacy knowledge of a few workers as a support network."

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The Easiest Way To Save Money

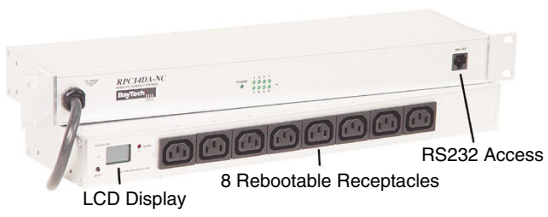
Here's an easy way to pinch pennies through life cycle mastery: Use what Info-Tech's Darin Stahl calls a "cascading refresh."

"New servers can push midlife servers down, replacing old servers in a cascade effect," he says. The new servers run mission-critical services. Midlife servers can be used for important but nonvital functions, such as static Web sites or once-a-month billing, and old servers can be ditched.

"Replacing the oldest servers in the data center with midlife units allows the server investment to be amortized over longer periods of time," says Stahl. It not only saves money on your balance sheet but lets you intelligently match your equipment's power to its business use, changing the equation over time.

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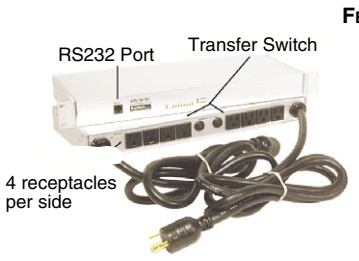
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Power Play

Continued from Page 1

Internet power switches, such as those offered by WTI (Western Telematic Inc.; www.wti.com), can provide an effective way to control power in a rackmount environment. Power can be switched on, off, rebooted, or set to user-defined defaults in response to commands that can be issued online, WTI notes. This control measure works well for colocation applications, where data center managers might not be physically present but still need to monitor power and switch it off if needed.

Putting those types of controls in place for numerous types of equipment, such as servers, routers, appliances, and even Web cams and firewalls can give an IT center more options when it comes to power management.

BayTech (www.baytech.net), another vendor offering remote site management products, notes that using such products can help system administrators respond more quickly to issues, cut down onsite visits, and speed ROI on some pieces of equipment. With products such as those from BayTech and similar vendors, IT managers can automatically switch to an auxiliary power source in the event of an outage, distribute power, and do remote management through software.

Some products even let data centers monitor how much power is being used in individual outlets. At Cyber Switching (www.cyberswitching.com), the company designs and manufactures PDUs that distribute power to rack equipment, and the PDUs can monitor current usage by outlet, as well as provide virtual circuit breaker protection. The company believes that by taking distribution down to this level of specificity, it can offer the greatest level of control for data center managers and protect IT investments as well.

Tailor The Environment

Overall savings can be achieved by monitoring equipment, which offers better power utilization and prevention of equipment overheating, but also by tailoring an environment to address its specific needs, says Tom Kennedy, Geist's marketing manager.

Geist and other firms have the ability to build products to order, meeting the specific applications of a particular installation. Power can be tricky to predict and include factors such as the amount of local access, age of a building, cooling systems installed, and a number of other issues. One-size-fits-most products might not be geared toward a specific situation, Kennedy notes, especially for building upgrades or add-on construction as opposed to all-new centers.

Consultants can provide the correct product application, he says: "Monitoring the environment and providing efficient power distribution that adapts transparently to existing facilities is key."

The Biggest Expense

For many data centers, a budget crunch comes with cooling. Not only does equipment need to have adequate power to run, but it also requires a cooling system that takes even more juice. Making cooling systems more efficient can have the added benefit of reducing power costs as well, making for a potent one-two punch that's tough to beat. When evaluating new cooling systems, experts advise that data center managers also look at whether the proposed strategy will increase power costs or decrease them. Installing a system that costs much less to cool a room and yet takes more electricity could cause a data center to take longer in reaching a return on its investment.

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Security Appliances For Your SME

Continued from Page 1

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This ability to incrementally increase security is appealing for IT managers who don't or can't replace systems in a wholesale fashion. As new threats emerge, new appliances can be deployed to deflect the threat from the enterprise. In addition, standalone appliances don't incur large upfront costs because they're purchased and deployed incrementally.

The downside to managing multiple appliances is having to manage multiple appliances across the network. For each appliance, IT managers will need to routinely perform software updates, monitor and respond to alerts and logs, and periodically replace hardware components in each device. And IT managers will have a variety of vendors to cope with when it comes to support and warranty service.

One Appliance To Rule Them All

An alternative to the dedicated appliance is the UTM appliance, which combines multiple security devices into one appliance, reducing the number of physical devices on your network as well as consolidating the number of vendors you deal with.

Michael Johnson of Sensory Networks (www.sensorynetworks.com) reports there are three main drivers for the increased adoption of UTM appliances: "ease of use, cost, and security coverage," he says. "Particularly for SME network administrators, each new box they have to install, configure, monitor, upgrade, and basically administer adds to their workload."

Johnson says there are financial considerations, too. "When you're looking at purchasing a security infrastructure from a budgeting point of view, a UTM device can have significant savings over multiple devices in both the short term and long term."

Although financial considerations weigh heavily in any IT purchase, Johnson says one main motive for UTM devices is security coverage. "Multiple devices, particularly from different vendors, are not necessarily going to work together effectively. At one end of the scale, the coverage may overlap, with each box doing partly the same job—wasting an SME's money. At the other end, [standalone appliances] can leave gaps in coverage, rendering the network vulnerable."

What it often boils down to is assisting your IT staff in deploying sound systems. Johnson says, "An email virus scanner could assume that the SMTP conversation contains no buffer overflow attacks, but the firewall or IPS it's combined with could be making completely different assumptions." Without adequately trained IT departments, standalone security appliances may give a false sense of protection.

Different Paths To Security Nirvana

But not all vendors agree on the direction for security appliances. According to Pao, "We believe that the UTM market is an interesting proposition, but we believe the large majority of the market is not ready for it." In contrast, Johnson says, "despite not being one size fits all, one size definitely fits most."

One area where security appliances often fall short is in threats outside their design parameters. David Goldsmith of Matasano Security (www.matasano.com) says IT managers need to have a better understanding of their exposure and less trust in vendors.

"Security isn't just about Windows vulnerabilities. Storage appliances, backup protocols, and management agents are examples of internal applications that haven't been seriously tested and are crawling with vulnerabilities. 'Perimeter' vulnerabilities in Web servers and operating systems are getting harder to find, and attackers are shifting targets to the soft underbelly of internal applications," Goldsmith says. "IT managers need to track security updates in all their applications, and, more importantly, hold vendors to account for ensuring the safety of their code."

Bring Appliances Up To Speed

One trend that will impact both appliance segments is the need for faster performance in the appliances as network speeds increase. According to Michael Johnson of Sensory Networks (www.sensorynetworks.com), "What we've seen is that a lot of boxes are rated at 100Mbps but [are] actually incapable of getting above 5Mbps once you turn on antivirus, antispam, IPS, antispyware, and a firewall/VPN. So if you're on a T3 and want the full 45Mbps, then hardware acceleration is something you should look at." This acceleration can come in the form of either ASICs (application-specific integrated circuits) or FPGA (field programmable gate array) hardware.

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Manage Your Assets, Manage Your Budget

Continued from Page 11

Stahl also recommends you keep a spare parts supply, keep up preventive maintenance, and keep a close eye on older gear. "Analyze support tickets in a manner that allows you to identify patterns of failure and single out faulty hardware," he says. An ounce of prevention is more than worth an all-nighter when a server goes down.

Be Precise

Do you know how many assets your data center has? If not—and if you don't know how to find the answer, save for counting up servers and notebooks and routers by hand—then let software lend you some precision, the better to maximize your equipment's useful life.

EAM (enterprise asset management) software will not only help you craft a strong asset management plan but also automate it. Some programs even automate asset detection itself, scanning your network to determine every endpoint, server, router, printer, fax, and handheld you have, not to mention high-end software such as CRM and ERP apps, and even licenses.

The result? Programs such as Intuit's Numara Track-It! (www.itsolutions.intuit.com), PerfCap's FindIT (www.perfcap.com), and Liberty Street Software's AssetManage (www.assetmanagesoftware.com) can make it easy to track a thousand devices, knowing the precise point to send each one to the scrap heap or cycle it to a different use. (For more on cycling, see the "The Easiest Way To Save Money" sidebar.)

Get The Most Out Of Servers

Speaking of servers, get the most out of the ones you've got, before you buy more. Info-Tech's Stahl says the best way to make end-of-life server decisions is to monitor a box over time, looking at "storage throughput, network bandwidth, and CPU utilization." Problems such as excessive disk activity might point to a need for more RAM—a cheap upgrade compared to a full replacement. And tools such as HBAs (Host Bus Adapters) and TOEs (TCP Offload Engines) can reduce the load on CPUs.

Some servers, of course, have simply met their ends. "If the server CPU utilization is consistently over 80%, or reaches 100% even for short periods, then this machine has reached its capacity for this particular application," says Stahl.

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Product Releases

COMMUNICATIONS

Security

■ **Clearswift** unveiled the MIMEsweeper Web Appliance for improving content security. The new offering also brings with it a URL blocker and antivirus and antispyware capabilities. Other features include bidirectional content security, Kaspersky Lab's IT security, Aluria Software's antispyware protection, and a user-friendly GUI. Clearswift offers both the Web appliance and the MIMEsweeper engine software.

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■ **Reconnex** announced the iGuard 2600S with data-leak protection, which is designed for VARs and for distribution to midsized companies. The appliance secures data and helps to achieve regulatory compliance. It also offers administrative and reporting tools, as well as preconfigured policies for Sarbox, HIPAA, GLBA, company confidentiality, data privacy, legal accountability, and employee appropriate use. Release 5.0 software is included, and it supports Internet connections of up to 10Mbps. The iGuard 2600S has a 2U footprint and provides 400GB of storage. Prices start at $34,995.

Telephony

■ **Multi-Tech Systems** announced the CallFinder GSM cellular gateway to route cellular wireless calls through traditional phone systems. The primary benefits of a cellular gateway are that it allows toll-free calls to other cell phones, functions as a backup should your traditional phone system fail (including emergency 911 service), and allows your cell phone to work as a primary voice network in remote locations. CallFinder GSM connects to a standard telephone system analog port, which then allows the sending and receiving of phone calls through any contracted cellular wireless network.

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■ **TalkSwitch** announced the 280VS and 284VS fully hybrid IP private phone network telephone systems. Both systems accommodate two incoming telephone lines and provide eight local extensions that the user can configure as IP or analog, as well as 10 remote extensions. The 284VS also supports four VoIP trunks to use traditional telephone service over a VoIP network. Both systems come with TalkSwitch software version 4.0 to configure local extensions for either analog or IP. The 280VS is priced at $1,095, and the 284VS is available for $1,395.

Wireless

■ **Radio Frequency Systems** announced the wireless indoor ClearFill suite, which is designed to help organizations expand wireless coverage for applications such as cellular services, Wi-Fi, and mobile TV. The suite is composed of multiple offerings, including ClearFill Air for expanding wireless coverage within small buildings, ClearFill Line for cable- or distributed antenna-based networks, ClearFill Boost for improving signal strength, and ClearFill Space, which is a hybrid offering designed for medium-sized to large indoor facilities. The ClearFill suite will be available in the first quarter of next year.

END NODES

KVM & Console Access

■ **Aten Technology** has announced two new enterprise-class KVM products that offer IP access and support for RADIUS servers. The products, known as KN-2108/2116 CAT5 KVM on the NET, are available in 8- and 16-port models and are part of Aten's ALTUSEN enterprise-class KVM line. Aten says the units provide secure local and remote access to up to 128 servers via cascading. The units also include remote and advanced encryption technologies. The 8-port unit is listed at $1,699.95, and the 16-port unit is $2,995.95. Among the KN2108/2116's features is the ability to monitor up to 16 computers at once on-screen. Additionally, three users (two remote and one local) can control three different connected computers at once. Up to 32 concurrent remote users can access the KN2108/2116 via IP.

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■ **Black Box** released the ServSwitch DTX, a next-generation ServSwitch KVM extender. Black Box says the DTX eliminates distance limitations associated with copper and fiber-optic KVM extenders and extends multimedia server or CPU, DVI-I video, and keyboard and mouse signals up to thousands of miles over an IP network to a workstation with a DVI monitor, speakers, and USB or PS2 keyboard and mouse. No software is needed with the product, which displays 24-bit, 60fps color video and supports up to a 1,280 x 1,024 resolution. The ServSwitch DTX also lets users make connections via traditional means, point-to-point copper extensions up to 100 meters, globally over IP, and globally over IP with USB virtual media support.

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■ The new EDS16PR and EDS32PR are high-density device servers from **Lantronix**. Running the company's Evolution OS and housed in 1U rackmount modules, the servers support up to 16 or 32 devices, respectively. They support RSS, XML, and email and provide Web services and top-notch security for devices attached to them.

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In The Telecom World, Sometimes Smaller Is Better

Kaparel Adds Compact 5U DC-Based Shelf To ATCA Lineup

by Joseph Pasquini

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THE LACK OF CONSISTENCY across the telecommunications hardware arena was once viewed as the universal scourge of both managers and installers alike. However, those days are gone thanks to the standardization brought about by the ATCA (Advanced Telecom Computing Architecture). ATCA, otherwise referred to as AdvancedTCA, is a series of industry-set specifications focusing on carrier-grade communications devices. The ATCA spec supports different protocols such as InfiniBand, StarFabric, Ethernet, PCI Express, and RapidIO

Leveraging the benefits of the AdvancedTCA, Kaparel—a Rittal company located in Waterloo, Ontario—has introduced a compact electronic packaging shelf intended to provide network managers with a high-performance, space-saving solution specific to 48V DC telecommunication environments.

"Right from the start, Rittal has been actively involved in the development of the ATCA standard," says Rittal's Corporate Spokesperson Stephan Gursky.

In addition to its support of the AdvancedTCA specification, the Kaparel 5U shelf is also compliant with RoHS (Restriction of Hazardous Substances) and PICMG (PCI Industrial Computer Manufacturers Group) 3.0.

Featuring an ATCA backplane composed of six front-loading horizontal slots, the compact design of the Kaparel 5U DC-powered telecom enclosure offers two horizontal RTM (rear transmission module) slots along with two horizontal switch slots with RTM. Two 48V PEMs (Power Entry Modules), rated at 50A each, power the unit and are optionally available with or without filters and controllers.

One PigeonPoint Shelf Management Controller is included, as is a field-replaceable dust filter for the enclosure itself. Intel's NetStructure shelf manager is also supported. Measuring 19 inches wide and 400mm deep, the shelf's dual hot-swappable fan trays generate cooling outputs up to 200W per slot in the front and up to 30W in the RTM area.

The Rittal shelf can be fitted with either a dual-star or full-mesh backplane configuration. The shelf ships completely wired and function-tested by the manufacturer. Front panels, carriers, and stainless steel handles are all available as accessories. IT managers can also order PICMG 3.0-compliant custom face plates.

The 5U DC-based shelf augments Kaparel's existing line of AC-based shelf enclosures. Competing DC-powered 5U solutions include Elma's ATCA 5U System (www.elma.com) and Schroff's 1916 (www.schroff.us). While Schroff's enclosure does offer redundant shelf managers, it does not provide RTM. Kaparel's shelf is the only one to feature six slots as well as a cooling fan on both sides of the enclosure. AC power is optional for the Elma enclosure.



SNAPSHOT

Rittal 5U DC-Based ATCA Shelf From Kaparel

DC-based version of 5U AdvancedTCA telecom shelf offers dual power modules and cooling fans

www.Processor.com/Rittal-Kaparel

COMPONENTS

OCTOBER 27, 2006

New Expansion Possibilities

Koutech Offers Range Of Products Based On Emerging Standard

EXPRESSCARD is the next generation in expansion slots for your notebook computer, and Koutech is proud to offer a wide range of I/O expansion solutions based on this emerging standard.

Koutech's new ExpressCard products let you take advantage of the high-speed performance offered by the new PCI Express technology, using the new ExpressCard slot on notebook computers from Dell, HP, Toshiba, and many other major manufacturers.

The ExpressCard technology was designed to improve upon the PC Card standard and provide high-performance, modular expansion for desktops and notebooks in



a smaller form factor than current PC Card products, according to the PCMCIA.

Koutech currently offers three versions of the new ExpressCa rd:

- The **1002E Dual Port FireWire/1394a ExpressCard** includes two 400Mbps 6-pin FireWire/1394a ports on an ExpressCard/34 module.
- The **1615E Dual Port FireWire/1394b (FireWire 800) ExpressCard** includes two 800Mbps 9-pin FireWire/1394b ports on an ExpressCard/34 module.
- The **7004E FireWire/1394a & Hi-Speed USB 2.0 Combo ExpressCard** includes two 400Mbps 6-pin FireWire/1394a ports and a Hi-Speed USB 2.0 port, using the latest PCMCIA ExpressCard/34 interface.

ExpressCards come with a five-year warranty and work with Windows 2000/XP/Server 2003. They support PCI-E and USB technologies, providing simple connections for scanners, printers, external CD/DVD writers, hard drives, and RAID enclosures.

Koutech ExpressCards are based on the ExpressCard/34 module (34mm wide), so they can fit into either a Universal or 34mm ExpressCard slot. If an ExpressCard/34 module is inserted into a Universal slot, the internal guidance feature gently directs the module over to engage the connectors.

Koutech ExpressCard 1002E, 1615E, and 7004E

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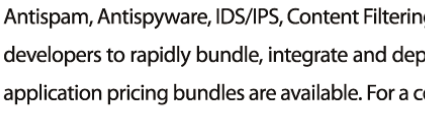
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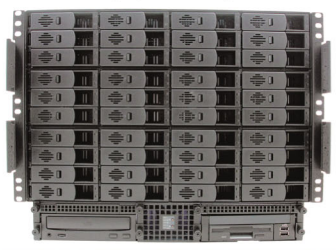
3U NAS



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- Hardware RAID Controller /w 256MB Cache
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- Dual Gigabit Network Card
- Windows Storage Server 2003 R2
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8U NAS



- Data Capacity from 3.2TB to 30TB
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- Hardware RAID Controller /w 256MB Cache
- RAID 0, 1, 10, 5 and 6 Supported
- Dual Gigabit Network Card
- Windows Storage Server 2003 R2
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www.sensorynetworks.com/Ecosystem/

The C-2000 next-generation product range provides content security acceleration solutions from 100Mbps to 10 Gbps. SAA also provides multicard support.

C-2000 SX

Entry level card for SME appliances rated from 100 Mbps - 1 Gbps.

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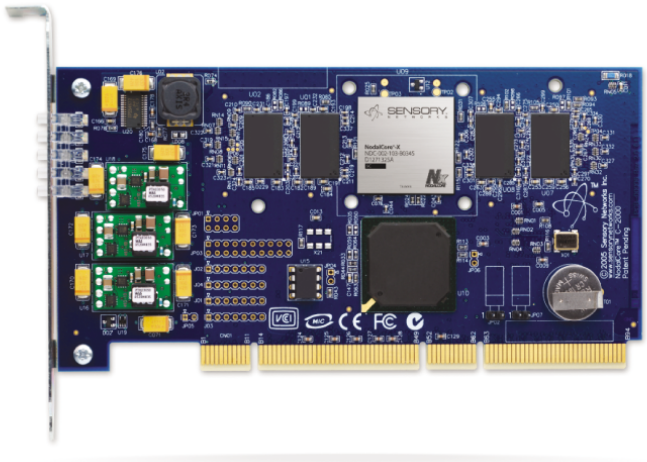
Mid-range card for appliances rated from 1 Gbps - 2 Gbps.

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Scalable architecture provides security appliance vendors with a wide range of performance price points.

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SENSORY NETWORKS

Product Releases

Continued from Page 15

Mobile

■ **Fujitsu** announced the Stylistic ST5111 and ST5112 Tablet PCs with Intel Core Duo Mobile Technology. These 3.5-pound Microsoft Windows Vista-capable slates include a number of security features, including embedded TPM (Trusted Platform Module), a dedicated Smart Card slot, two-level hard drive password, BIOS-enabled Computrace/LoJack theft recovery service support, and a universal lock slot. The Stylistic ST5111 Tablet PC features a 10.4-inch screen with an XGA TFT display that is viewable outdoors and under direct sunlight. The Stylistic ST5112 Tablet PC has a 12.1-inch indoor/outdoor XGA display with greater than 160-degree wide viewing angles. Using a standard 6-cell battery, you'll receive up to six hours of computing time or up to nine hours of battery life with a high-capacity 9-cell battery.

• • • • •

■ **Lenovo** announced the ThinkPad T60 widescreen notebook PC. Depending on configuration, the new 15.4-inch widescreen notebook can weigh as little as 5.1 pounds and provide up to eight hours of battery life. The 15.4-inch ThinkPad T60 comes with a choice of Intel integrated graphics or ATI discrete graphics capabilities on an optional WSXGA+ screen. It also has integrated 3G WWAN on Cingular or Verizon networks, an embedded 802.11n WLAN card, Bluetooth, and infrared. The ThinkPad T60 widescreen notebook uses Intel Core 2 Duo processors. The Active Protection System and spill-resistant keyboard provide protection, and the Thinkpad also comes with Lenovo's Embedded Security System and an optional fingerprint reader to help guard against unauthorized data access.

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■ **Pelican** announced the 1495 Laptop Case for 17-inch notebooks. The case provides close to 1,000 cubic inches of storage space and has a built-in programmable combination lock, as well as stainless steel-reinforced padlock protectors. Three variations of the case are available: the 1495CC #1, the 1495CC #2, and the 1495. The 1495CC #1 has a lid organizer, is nylon-padded, includes a laptop sleeve and a utility pouch, and has a shock-absorbent computer tray and a ballistic shoulder strap. The 1495CC #2 includes Pelican's high-density Pick 'N' Pluck foam, a lid organizer, and a ballistic nylon shoulder strap. The 1495 has the Pick 'N' Pluck foam, as well as high-impact, structural resin, an open cell-core wall, a lid with a polymer o-ring, dual-action latches that are tested to nearly 400 pounds, and an automatic Gore-Tex pressure equalization valve. The 1495 Laptop Case CC #1 sells for $309.95.

Monitors & Displays

■ **ViewSonic** unveiled a new line of widescreen LCD monitors. The new ViewSonic monitors include the VX2235wm, the VX2035wm, and the VX1935wm, 22-, 20-, and 19-inch widescreen LCDs, respectively. The VX2235wm, VX2035wm, and VX1935wm also feature a newly designed thin bezel with integrated full-sound stereo speakers and power supply, helping users keep their desktops free of cable clutter. The VX2235wm combines a 1,680 x 1,050 native resolution, 280 nits of brightness, and a 700:1 contrast. The VX2035wm offers 1,680 x 1,050 native resolution, 300 nits of brightness, and 800:1 contrast ratio, while the VX1935wm delivers a native resolution of 1,440 x 900, 300 nits of brightness, and a 700:1 contrast.

Printer

■ **Kyocera Mita America** introduced the FS-C5015N and the FS-C5025N full-color printers. The FS-C5015N and the FS-C5025N deliver 17ppm and 22ppm output in both color and monochrome, respectively. Both devices have 600dpi multibit color image quality. The FS-C5015N and the FS-C5025N also have 10/100Base TX Ethernet for seamless network integration. Both devices also have 128MB of print memory that is upgradeable to 640MB. An optional 40GB hard drive enables document printing and e-MPS functions, private print, job storage, proof and hold, and virtual mailboxes to help offices maximize product functionality while minimizing room for user error or confidentiality breaches. Both printers are compatible with Windows, Novell, Mac, and Unix operating systems.

Projectors

■ **BenQ** expanded its HD projector lineup with the BenQ W9000. This projector has a native resolution of 1,920 x 1,080, BenQ's Senseye technology, Advanced Continuous

Long-Term Secure Storage

Ultra Density Optical Storage Available In Write-Once & Rewriteable Formats

by Julie Sartain

• • •

Long-term secure storage for high-volume documents such as client records, audio or video files, images, financial information, hospital and medical records, engineering documentation, and even emails is available today from many companies. UDO (Ultra Density Optical) professional archival storage that's available in write-once and rewriteable media formats (and is Ecma and ISO standards certified) is not so common, and finding a reliable product with all the features you require is difficult, especially with the UDO write-once technology.

This feature is a priority when customers need to archive documents that enable regulatory compliance, best practice/audit trail management, and records that must be archived in an unalterable, nonerasable format for legal admissibility.

"The UDO Archive Appliance provides absolute data authenticity for any application where archived data must remain 100% unchanged over its life cycle. This is far superior to data masking that is marketed as digital shredding by disk-only archive vendors," says Terri Black, vice president of marketing at Plasmon.

The UDO Archive Appliance simplifies the cost and management of archived data by providing the performance and scalability to simultaneously manage multiple archive applications, Black notes. It also

Product Releases

Electronic IRIS, and a quiet design that reduces the fan noise to 23dB. The W9000 has an HDMI interface and works seamlessly with a wide range of devices, including HD DVD players, Blu-ray players, and gaming consoles. The Advanced Continuous Electronic IRIS brings the contrast ratio to 8,500:1 while optimizing the light intensity in bright and dark scenes. In addition to its five preset modes, the W9000 includes ISF Day and ISF Night calibration settings for best image quality in different lighting conditions.

Server

■ **Hitachi** released what it claims is the industry's first enterprise-class blade server, which it says can service mission-critical, enterprise-level computing needs while at the same time lowering ownership costs and increasing scalability and flexibility. The server, part of Hitachi's BladeSymphony family, includes Virtage, which Hitachi says is an embedded virtualization feature that builds virtualization into the server's hardware, giving users an alternative to third-party software. The server also includes SMP (symmetric multiprocessing) interconnect technology, which lets users configure multiple blades to work as a single system. The server will be available in North America next month.

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■ **Unisys** announced new models of its ES7000/one Enterprise Server line to improve the service quality in the virtualized computing environment. The servers are priced 35% lower than previous models and incorporate the Dual-Core Intel Xeon Processor 7100 series. The ES7000/one models help provide a real-time infrastructure to help enterprises optimize IT assets and balance the need for better quality, security, and predictability. Unisys testing shows the ES7000/one can handle peaks from variable workloads more efficiently than an aggregate of multiple, smaller four-processor configurations.

Storage

■ **Archion** has released a new product called the Synergy HD (High Definition, High Density, and High Demand), which the company says is certified with all versions of Unity from 3.x through 4.2.x. The Synergy HD is a full-featured SATA II-to-FC RAID storage unit. It was designed for networking digital video systems in an Avid Unity environment. The unit is preconfigured from 4 to 8TB with two ports of 2GB FC. The Synergy HD is compatible with Mac OS 9/X, Linux, and most varieties of Unix. Additionally, it includes a 3U rackmountable chassis, Ethernet and RS-232 port, three hot-swappable cooling fans, and more.

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■ **Iomega** announced the next generation of its popular Iomega StorCenter NAS devices. The new Iomega StorCenter Pro NAS 250d servers are the first Iomega NAS servers with Windows Storage Server 2003 R2. The StorCenter Pro NAS 250d 500GB server comes with a built-in Iomega REV 70GB drive. The Iomega StorCenter Pro NAS 250d 1.5TB Server with print capability uses three 500GB SATA-II hot-swappable hard drives and supports hardware RAID 5, RAID 0, and RAID 1. The 750GB model uses three 250GB drives and supports the same hardware RAID options. The 750GB and 1.5TB drives have dual Gigabit Ethernet connections, an external Ultra 320 SCSI connection, and an Intel Celeron D 352 3.2GHz processor. The StorCenter Pro 250d 500GB Server with REV Built-In and the StorCenter Pro 250d 500GB Server are currently available. The StorCenter Pro 250d 750GB Server with Print and the Iomega StorCenter Pro 250d 1.5TB Server with Print are expected to be available December 30.

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■ **QLogic** has launched the SAN Connectivity Kit for EMC CLARiiON AX150. The kit now includes a 4Gb QLogic SANbox 1404 Fibre Channel Switch, two or four 4Gb Fibre Channel SANblade HBAs, software, cables, and connectors. With the exception of the storage device, the kit provides all of the tools necessary to install and manage a SAN. EMC has qualified the SAN Connectivity Kit for EMC CLARiiON AX150 as E-Lab Tested. The kit can support as many as 10 host servers and is scalable from 750GB to 6TB.

Components

■ The eAutomation Group of **Advantech** has introduced the AIMB-542, a micro-ATX motherboard built on the Intel 865G chipset. The motherboard supports Intel Pentium 4 and Celeron D processors and up to 4GB of dual-channel DDR400/333 system memory.

Go to Page 18

manages the storage of small files quite efficiently, and it allows for backward compatibility. The cost and risk associated with technology "refreshes" is mitigated by guaranteed backward-read compatibility of the UDO drives. The data remains untouched on the original media, while an inexpensive drive upgrade maintains access.

In addition, Black says that the UDO Guard, a security feature of the UDO drive, enables proper management of removable media by requiring a password to access data on the UDO media. The UDO Guard provides a first level of security against unauthorized access for media stored onsite or in transit.

"And we're helping customers address environmental challenges while improving their operating performance," says Black. "With fewer moving parts and less energy consumption for power and cooling, the UDO Archive Appliance is an energy-efficient alternative to other solutions."

Competition includes any company that offers disk, tape, and backup solutions, such as EMC's Centera (www.emc.com) and Network Appliance's FAS250 (www.netapp.com). But the difference between these technologies and the Archive Appliance is that the Plasmon solutions offer stable, reliable, long-term retention—no matter what the environmental conditions are, says Black. "By combining the benefits of RAID storage with the longevity of optical write once, read many (WORM) storage, Plasmon's UDO Archive Appliance offers secure storage that any application can use." P



SNAPSHOT

Plasmon UDO Archive Appliance

Starts at $15,000

Provides data authenticity for applications with archived data that needs to stay unchanged over its life cycle

www.Processor.com/Plasmon





Product Releases

Continued from Page 17

The motherboard also supports Hyper-Threading and includes an 800/533 front-side bus, Intel Extreme Graphics 2 technology, a RealTek RTL8100C fast Ethernet LAN 10/100 controller, AGP 8X slot, three PCI slots, two SATA 150MBps slots, eight USB 2.0 ports, and 6-channel audio support. The motherboard is now available directly from Advantech starting at $185.

SOFTWARE

Application & Web Development

■ **AdventNet** released the latest version of its Web-based test automation tool that supports geographically distributed test automation. QEngine 6.6 helps users test applications and Web services. The software supports any browser and includes a QEngine Toolbar that is installed on the client. The toolbar lets users create and modify tests, as well as schedule tests and analyze test results. The software offers browser compatibility tests and has a generic database interface that lets users test MySQL, Oracle, and SQL Server, among others, without changing scripts. It can store scripts and results on a server to create a central repository and support for Windows and Linux. Users can create a script in Windows and then use the same script in Linux.

Business Productivity

■ **Cimmetry Systems** released software that facilitates team collaboration and information communication through distributed enterprises. AutoVue 19.1 Web Edition for Documentum 5.2.5 and 5.3 SP2/SP3 offers digital mockup, real-time collaboration, and native document visualization for EMC Documentum WDK and Webtop. It offers access to 2D/3D CAD, EDA, image and Office formats, among others, which are stored in an ECM Document repository. The software lets client systems view documents without leaving a footprint on the client PCs.

Imaging & Printing

■ **FaxCore** announced its new FaxCore SharePoint Connector for Microsoft's SharePoint Portal Server 2003. It allows fax content indexing through OCR (Optical Character Recognition), allowing searches of the text. Auditing of received faxes, access control, and security enhancements are other features of the new software.

Network & Systems Management

■ **CA** released a new version of the Wily Introscope, a monitoring utility for business-critical Web applications, portals, and SOAs. Version 7.1 is fully integrated with CA's Unicenter Network and Systems Management and features new reporting and chart views, a new navigation interface, and HTTP tunneling and proxy support.

CA also introduced the Unicenter Advanced Systems Management r11.1, a platform for managing and optimizing virtualized and clustered-server environments. The new release supports a range of virtualized platforms, including HP MC Service Guard, IBM HACMP and pSeries LPAR-capable eServers (P4 and P5), Microsoft Virtual Server and Cluster, Red Hat Advanced Server cluster, Sun Enterprise and Mid-Range servers, as well as Sun Cluster and Sun Fire, Veritas Cluster Servers running Solaris and Windows, and VMware ESX/GSX Servers. Other features include continuous discovery, managed resource reporting, and visual mapping.

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■ **Novell** introduced desktop-to-data center products, which provide cross-platform support (Linux, Unix, and Windows). The ZENworks products include ITIL-based services and offer management tools for virtual machines as well as other IT resources. ZENworks Orchestrator uses policy-based management to schedule jobs, reserve resources, reprioritize resources, and provision and deprovision resources. ZENworks Virtual Machine Management provides virtualization tools for Linux, Unix, and Windows systems and supports virtualization environments such as VMware, Microsoft, and Xen. ZENworks HPC Management offers grid-based management for Java applications and supports parallel execution. Finally, ZENworks 7.5 Asset Management generates readiness reports for a variety of OSes, including Windows Vista and SuSE Linux Enterprise Desktop 10.

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■ **Opalis Software** has launched a new version of Opalis Integration Server. The latest version includes more than 90 out-of-the-box workflow processes, five new integration packs (for a total of 27 available integration packs), a redesigned dashboard, and more. Version 5.3's new integration packs are for BMC Atrium, BMC Remedy, Microsoft SCOM, Microsoft Active Directory, and VMware VirtualCenter 2. The new dashboard offers extensive views of statistics and access to key metrics. Opalis Integration Server 5.3 also offers incident-process automation, problem-process automation, change-process automation, configuration-process automation, and release-process automation.

Security

■ **AdventNet** released an upgrade for ManageEngine EventLog Analyzer, which the software publisher is targeting at businesses that are focusing on SIEM (Security Information Event Management). The Web-based software manages syslog and event logs and supports reporting for a variety of devices, including Windows and Unix hosts, routers, switches and other syslog devices. The software has several new features, thanks to the upgrade, including custom host type, multiple DB filter support for hosts or host groups, host and device display name support, configurable device icons,

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Prevent Data Leakage

PortAuthority 5.0 Offers Appliance-Based Information Protection

by Paul Ferrill Jr.

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TODAY'S REGULATORY environment does not differentiate between intentional and inadvertent disclosures. Protecting the information is the mandate, and companies must take any measures necessary to make it happen. Hardware appliances have made inroads for jobs such as antispam, firewall, and SSL VPN. PortAuthority 5.0 is the latest offering from PortAuthority Technologies using an appliance-based approach to deliver a complete ILP (Information Leak Protection) solution.

PortAuthority approaches the problem of protecting information from three different aspects, covering data at rest, data in motion, and data in use. This function identifies confidential information on laptops, workstations, and servers without the need to install a software agent. Using prebuilt policies, the discovery engine identifies violations and provides a unified management and reporting system for remediation purposes.

Monitoring internal and outgoing data-in-motion helps mitigate potential violations through the use of Web-based email or transfer to an unauthorized network connection. A client agent is required to protect data-in-use and prevent such actions as copying specific documents to a removable USB drive. Protecting against unauthorized printing uses a PortAuthority printer agent, along with administrator-established policies.

PortAuthority 5.0 uses unified policies for all types of data and incorporates a new graphical user interface to help simplify the ILP task. The new GUI makes it possible to drill down and remediate a violation with three mouse clicks. Unified policies help direct the information to the person who needs to know. Financial issues go to the CFO, while computer security matters go to the information security office.

Using an appliance-based approach makes it possible for PortAuthority to deal with networks with more than 10,000 users and gigabit traffic. Smaller-volume solutions are also available, handling up to 1,000 users. Each appliance can be configured to perform multiple functions, depending on the environment and needs of the customer. Dedicated appliances help the solution scale to meet even the most demanding applications.

Competitive products come from companies such as Reconnex (www.reconnex.net), Vericept (www.vericept.com), and Vontu (www.vontu.com). The Reconnex iGuard appliance has received the "Designed for Documentum" logo designation from EMC for compatibility with its Documentum product. Both Vericept and Vontu offer software-based solutions. PortAuthority 5.0 integrates with Microsoft's SharePoint document management system by using the classification and user permissions to link to the owner of each document.



SNAPSHOT

PortAuthority Technologies PortAuthority 5.0

Management appliance: Starts at $50,000

Protector appliances for data-at-rest discovery and data-in-motion monitoring and enforcement: Start at $45,000

5.0 server agents for internal mail, publishing servers, and networked printer: $25,000 per server

A comprehensive, appliance-based information protection solution that scales to meet your most demanding needs

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Storage
www.Processor.com/PowerFile1

SEPTEMBER 15, 2006



The new **Active Archive Appliance (A3)** features:

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Product Releases

Continued from Page 18

and editing DB filters. Users can download the software for Windows or Linux (the free version monitors five hosts), and the 25-host version is available for $495.

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■ **Finjan** released Vital Security 8.4, which supports its Web security appliances. The proactive behavior-based Web security software protects corporate networks from online threats. According to Finjan, the enhancements minimize false positives and bolster its protection. The software also has enhancements that let administrators better manage and configure the software, including X Ray mode, which lets administrators test rules on live traffic before enforcing them. Finjan's Vital Security Web Appliances shield networks against spyware, phishing attacks, viruses, worms, Trojans, and other threats. Existing customers can update via Finjan's standard update procedure. The software is also available to new customers.

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■ **SECUDE** unveiled SECUDE signon 5.8 to meet internal security policy requirements for user authentication. SECUDE signon supports common user authentication with a Windows username and password as well as certificate-based authentication with digital certificates. Version 5.8 can be configured so that a Windows logon is refused if certificate validity has expired. A range of smart cards and USB tokens allow for an easy and secure user authentication via Single Sign-On. The secure smart cards are certified to ITSEC E4 to protect against attackers with specialist knowledge and resources.

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■ **Tablus** announced Content Alarm NW 5 to secure sensitive content from loss and misuse through multiprotocol monitoring and blocking software. Version 5 features 18 additional preset policy templates, and it prevents transmission through Web mail, email, or file transfer communications. Content Alarm NW 5 integrates with a variety of application delivery solutions, such as Blue Coat SG appliances, to thwart transmission across protocols such as HTTP, HTTPS, and FTP.

Storage

■ **CommVault** says that updates to its QiNetix data archiving software provide better retrieval capabilities for Outlook, providing a way to abide by new amendments to the Federal Rules of Civil Procedure. With QiNetix, you can now search email, IMs, attachments, PSTs, and SMTP messages should they be needed as part of a legal discovery process. DataArchiver customers with CommVault maintenance agreements can get the CommVault Outlook Add-in today.

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■ **Exanet** says that its new ExaStore-ICM (Intelligent Cluster Management) software brings enterprise features to clustered NAS without adversely affecting speed or scalability. It offers CDP (continuous data protection), a Point-in-Time system rollback feature, virtual volumes, and a host of other features.

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■ **Lakeview Technology** released MIMIX packages for AIX. The data protection, recovery, and cluster management packages offer CDP for IBM System p. The packages can restore data at any time and can work in integrated or standalone environments. According to Lakeview Technologies, the packages create an instant "undo" capability.

Telephony

■ **TalkSwitch** released TalkSwitch configuration software version 4.0, an upgrade that increases functionality and flexibility of TalkSwitch systems. The free upgrade is available via download at www.talkswitch.com/support. TalkSwitch says with the upgrade local extensions on the company's systems can now be enabled as analog or IP, thus converting those systems to hybrid IP PBXes, with users able to select the mix of IP and analog extensions to use. The 4.0 release also adds email notifications of new voicemail messages and boosts the number of remote extensions on each unit to 10. New TalkSwitch systems will bundle the software.

SERVICES

Network & Systems Management

■ Mainframe admins now have four new service choices to help them manage their systems and plan FICON migrations without guesswork. **McData's** offerings include a Mainframe Infrastructure ROI Analysis, a Mainframe Storage I/O Healthcheck, Mainframe Infrastructure ESCON to FICON Migration Implementation Services, and an Advanced Mainframe Infrastructure Seminar.

Training

■ **Symantec** released Security Awareness Center, a subscription-based online training program to help companies meet requirements for employee security awareness. The 24-hour online resource trains employees on potential information security risks related to their behaviors. The program outlines a basic understanding of policies as well as their respective responsibilities in protecting company assets. Users have unlimited access to training modules designed to raise their awareness of security and influence appropriate employee behavior. The online training center is updated monthly with new/relevant security awareness training material.

Network-Attached Backup For SMEs

Spectra D500 Provides Backup With A Central Administration Interface

by Tony Bradley

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One of the most important aspects of a sound disaster or business recovery plan is an effective and efficient backup solution. Regardless of whether a single server crashes, a remote office loses power, or a data center burns to the ground, the key to recovering quickly and resuming normal business operations is ensuring that critical data is available and can be restored or recovered quickly.

When "the enterprise" is just a handful of computers in a single location, that may be an easy task to accomplish. But many enterprises have hundreds or even thousands of servers that may be scattered across a region or even around the world. Choosing an effective backup solution is critical.

For large enterprises with large budgets, there are a wide variety of options and solutions to help manage data backup and business recovery. Small to midsized enterprises have to use more discretion in choosing an effective solution that fits their budget.

Competing with disk-based storage and backup appliances such as the Business Continuity Server from Asempra (www.asempra.com) or the VirtualTape Library from FalconStor Software (www.falconstor.com), Spectra Logic's new D500 provides administrators with both power and flexibility. It can be configured as a Windows Snapshot Device, and it can also be used to back up data from CIFS and NFS file systems, as well.

Ric Poland, a product manager with Spectra Logic, describes some of the reasons that might compel an SME to invest in the D500. "The D500 is the first backup disk appliance to be completely managed with a single common interface that also manages a tape library. It is priced at a point that offers a compelling and flexible solution for SMBs. The D500 has a powerful server that can run the customer's preferred backup software package, and because the D500 integrates a customizable, RAID-protected disk array, users may use the D500 as their master and media server for all their backup needs."

The D500 enjoys a unique position currently as the only network-attached appliance providing a common management interface for both tape- and disk-based backup systems.

SNAPSHOT

Spectra Logic Spectra D500

Starts at $11,995 for a 2TB version; ranges up to $34,995 for a model configured with Microsoft Data Protection Manager and 8TB raw storage

Offers a cost-effective solution for managing backups that is both versatile and powerful

www.Processor.com/SpectraD500

AirTight Upgrades WLAN Service & Planning Tool

SpectraGuard Planner Plots Positions For APs, Sensors

by Daniel P. Dern

• • •

"For wireless security, best practice is to have a separate sensor network overlay," says Jai Rawat, vice president of product management at AirTight Networks. "Any enterprise that wants to deploy wireless has to answer two questions: where to place wireless APs to provide the required coverage and where to place wireless security sensors to detect, stop, and locate wireless threats, intruders, and rogue APs."

Some WLAN vendors use access points also as sensors, but, Rawat says, "What's the most likely place an employee will put an unauthorized—'rogue'—AP of their own? Where there's no coverage, which means your AP sensors won't see these rogue APs."

"You want sensors where you don't have coverage," says Craig Mathias, principal at the Farpoint Group (www.farpointgroup.com). "The advice we generally give to enterprise-class organizations is to look seriously at these tools."

AirTight's SpectraGuard Planner provides predictive plans for 802.11 AP and sensor deployment, as an alternative to time-consuming onsite surveys or over-deployment, which can result in suboptimal service.

Updates and enhancements in the release 4.0 of SpectraGuard Planner include enhanced RF modeling, including cross-floor spillage modeling, an enhanced layout editor, and site integration and calibration with live site survey data. SpectraGuard's modeling database includes information on several new antennas and access points. Additionally, AirTight has made technical improvements to SpectraGuard to increase the speed and accuracy of its predictive modeling.

SpectraGuard Planner works with AirTight's sensors and with sensors from other vendors, according to Rawat. "We have some OEM sensor partners, like Siemens [www.siemens.com] and Colubris [www.colubris.com], and their products are predefined in our SpectraGuard. Companies can also add definitions for other sensors."

Most other WLAN planning products, such as Motorola's LANPlanner (www.motorola.com), focus on access point planning, not sensor deployment, says Rawat. Trapeze Networks' Ringmaster software (www.trapezenetworks.com) only handles Trapeze WLAN gear.

For companies that want outside help determining their AP and WLAN sensor placement, AirTight offers its WiFi Planning Services. "We have a Web-based form you can use," says Rawat. "Specify what type of coverage you want and, if possible, give us a floor plan and tell us what your building materials are. Then our architects and LAN planners model your facility and create a WLAN, WIPS, or WLAN and WIPS plan. We can typically turn this around in one to two days."

SNAPSHOT

AirTight Networks SpectraGuard Planner 4.0

SpectraGuard Planner 4.0 starts at $2,495

WiFi Planning Services start at $500 for a 50,000-square-foot single location

Plots optimum placement for your wireless access points and the sensors to monitor your wireless environment for threats

www.Processor.com/AirTight2

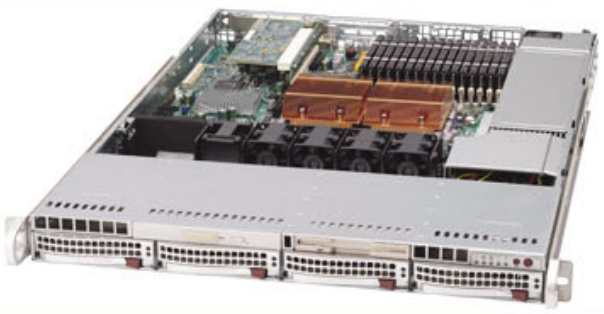
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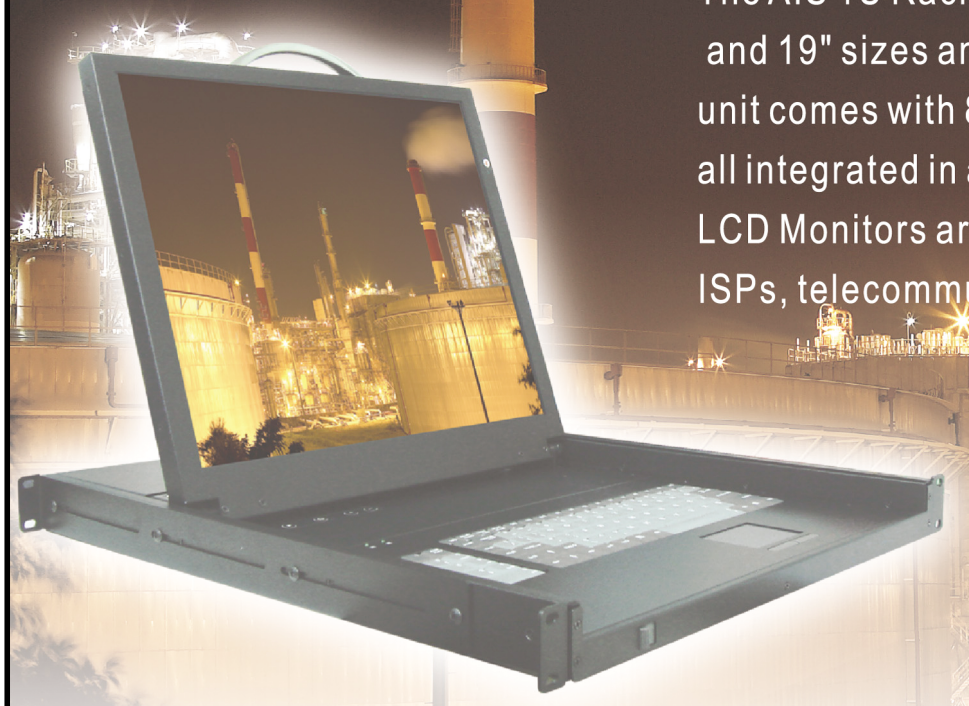
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Model	15 LDS210D	15 LDS210D-8P	17 LDS310D	17 LDS310D-8P	19 LDS410D	19 LDS410D-8P
Size of panel	15"	15"	17"	17"	17"	17"
KVM	1 port	8 ports	1 port	8 ports	1 port	8 ports
Display Area (mm)	304.1 (H) x 228.1 (V) (15.0-inch diagonal)	304.1 (H) x 228.1 (V) (15.0-inch diagonal)	337.92 (H) x 228.1 (V) (17.0-inch diagonal)	337.92 (H) x 228.1 (V) (17.0-inch diagonal)	376.3 (H) x 301.1 (V) (19.0-inch diagonal)	376.3 (H) x 301.1 (V) (19.0-inch diagonal)
Pixel Pitch	0.297 (H) x 0.297 (V)	0.297 (H) x 0.297 (V)	0.264 (H) x 0.264 (V)	0.264 (H) x 0.264 (V)	0.294 (H) x 0.294 (V)	0.294 (H) x 0.294 (V)
Number of Pixels	1024 (H) X768 (V)	1024 (H) X768 (V)	1280 (H) X1024 (V)	1280 (H) X1024 (V)	1280 (H) X1024 (V)	1280 (H) X1024 (V)
Contrast Ratio	500:1	500:1	400:1	400:1	600:1	600:1
Display Color	16.2M(6bits+FRC)	16.2M(6bits+FRC)	16.7M(8bits/colors)	16.7M(8bits/colors)	16.7M(8bits/colors)	16.7M(8bits/colors)
Brightness (cd/m²)	250 (Typ.)	250 (Typ.)	280 (Typ.)	280 (Typ.)	250 (Typ.)	250 (Typ.)
Input Signal	RGB Analog	RGB Analog	RGB Analog	RGB Analog	4 replaceable CCFLs edge-light(top/Bottom)	4 replaceable CCFLs edge-light(top/Bottom)
Viewing Angle	- 65°~ 65°,- 55°~ 65°	- 65°~ 65°,- 55°~ 65°	-70°~ 70°,- 60°~ 60°	- 70°~ 70°,- 60°~ 60°	- 85°~ 85°,- 85°~ 85°	- 85°~ 85°,- 85°~ 85°
I/O	Power: 12DV adapter Keyboard: PS/2 Mouse: PS/2 VGA: 15-pin D-Sub	Power: 12DV adapter Keyboard: PS/2 Mouse: PS/2 VGA: 15-pin D-Sub	Power: 12DV adapter Keyboard: PS/2 Mouse: PS/2 VGA: 15-pin D-Sub	Power: 12DV adapter Keyboard: PS/2 Mouse: PS/2 VGA: 15-pin D-Sub	Power: 12DV adapter Keyboard: PS/2 Mouse: PS/2 VGA: 15-pin D-Sub	Power: 12DV adapter Keyboard: PS/2 Mouse: PS/2 VGA: 15-pin D-Sub
Keyboard and Key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad	88-key keyboard and integrated Touch Pad 17-key numerical key pad
Power Consumption	33 Watts	33 Watts	38 Watts	38 Watts	44 Watts	44 Watts
Power Supply	AC 100-240V Universal	AC 100-240V Universal	AC 100-240V Universal	AC 100-240V Universal	AC 100-240V Universal	AC 100-240V Universal
Hot Key Control	OSD Hot Key	OSD Hot Key	OSD Hot Key	OSD Hot Key	OSD Hot Key	OSD Hot Key
Temperature	0℃~50℃ in operating; -20℃~60℃ in storage	0℃~50℃ in operating; -20℃~60℃ in storage	0℃~50℃ in operating; -20℃~60℃ in storage	0℃~50℃ in operating; -20℃~60℃ in storage	0℃~50℃ in operating; -20℃~60℃ in storage	0℃~50℃ in operating; -20℃~60℃ in storage
Humidity	10~85% in operating; 10-90% in storage	10~85% in operating; 10-90% in storage	10~85% in operating; 10-90% in storage	10~85% in operating; 10-90% in storage	10~85% in operating; 10-90% in storage	10~85% in operating; 10-90% in storage
Size	515mm (D) x484mm (W) x44mm (H)	515mm (D) x484mm (W) x44mm (H)	515mm (D) x484mm (W) x44mm (H)	515mm (D) x484mm (W) x44mm (H)	515mm (D) x484mm (W) x44mm (H)	515mm (D) x484mm (W) x44mm (H)

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I have a few simple requests for that jolly pink-cheeked big man this holiday season. I understand he has a busy crew of startup elves working on new storage solutions.

Holographic Storage Technology

Holographic storage has a long history as the "technology of the future." 2006 marks the first year of a commercial product. The first item on my list for Santa this year is the new holographic storage technology being offered by InPhase and Hitachi Maxell. This initial product offers 300GB holographic cartridges that can be written once for archiving and general WORM (write once, read many) applications.

Because of the volumetric basis of storage and the way the data is read from the disks, data is accessed in large chunks called "pages" that need to be buffered up to provide a steady data rate matching network speeds in the data center. The media has a shelf life before use of three years and an archival life of 50 years after recording. The InPhase Tapestry holographic drive is still pretty large, but it is several times smaller than the earlier prototypes were over a year ago.

I would like to see how well this media works compared to magnetic tape for archiving. I think both tape and holographic storage are capable of much higher storage capacity with further development, and the big question for IT users is which is more reliable for data recovery and which will last longer under expected storage conditions.

More Email, Please

I often get more than 200 email messages in a single day (probably due in part to signing up for every possible email update and newsletter I find that is even mildly interesting). Managing this volume of email is a challenge. This brings me to my next request for the big guy. I would like to get more email—what, am I crazy?

That is, email management. Putting stuff into folders and spam and virus filters is a help, but the sheer volume of stuff I get can take hours to go through. The spam filters catch things that I want to see and don't catch things that I don't want to see; they are only partially effective, and as a consequence I have to go through all my email, including the spam cache, to make sure that I don't miss something. We need tools that work better at sorting and categorizing our email and making sure that the things that we most want to read are the easiest to find. I probably also need to consider joining the army of text-typers who use their cell phones to access and answer their email just to stay on top of things. Maybe that's another thing that I need, Santa!

Reliable Backup

Santa, let me share with you my story about format obsolescence. This past summer I had a project that I was working on that required information from work in the mid-1990s. The computers I used at the time were mostly long gone, and I had to access backup copies of the data from old Syquest drive cartridges, Zip floppy cartridges, old 1.4MB floppy disks, and recordable CDs.

Getting the data back off of these old media formats and between multiple OS versions and types took some time. I still had Zip and Syquest drives to read the cartridges, but I had to find old computers that I could install the drivers on. The whole process took about three months, and I was unable to recover or sometimes recognize all the original data. Fortunately, much of the information was contained in published works I was able to access, and I had kept some paper copies of memos and other data that I was able to use to complete the project.

Santa, this brings me to one of the biggest issues facing an IT guy. How do I know that my backups work, and in this age of compliance, how do I know that I can get data back when I need it? I think this is one request that Santa can at least partially help me with.

There are several storage systems and software for small to large IT establishments that can make a data center manager sleep better at night. Some of these products, from companies such as Seagate, Buffalo, LaCie, and Iomega, offer direct-attached and network-attached storage solutions for even the smallest business, while many companies offer solutions for midtier and higher-end installations. The big names in this arena are EMC, Hitachi Data Systems, HP, IBM, NetApp, Sun, and Symantec.

So, Santa, these are my simple requests. I promise not to stay up and catch you leaving IT solutions under my tree. Tell you what, if I can't get all my heart's desires this holiday season, can you keep my list warm for future holidays and get some of those startup elves working on these more ambitious items?

Send your comments to tom@processor.com

TOM COUGHLIN

AUTHOR *Tom Coughlin is the author of numerous authoritative reports on digital storage and its applications. He is also the founder and organizer of the annual Storage Visions Conference (www.storagevisions.com) and lead consultant for Coughlin Associates, which provides digital storage technical and market analysis and consulting services. Coughlin is a frequent writer and international speaker on digital storage and storage applications. You can find out more about him at www.tomcoughlin.com.*



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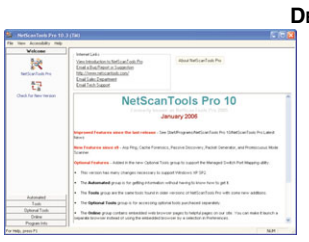
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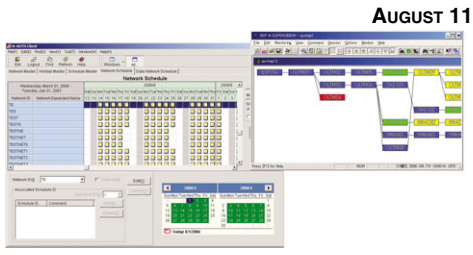
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Paddling Harder But Not Making Headway?

I just got back from the Developer Connections conference in Las Vegas—and yes, I had to immediately decontaminate by stripping down and laundering everything (including myself) to get rid of the cigarette stench. I'm simply amazed that Nevada seems to be one of the only states in the United States that lets people openly assault others with a biohazard. I doubt if the people who go to Vegas to gamble (and smoke) will have the fortitude to give up gambling if they aren't permitted to smoke indoors. Vegas might win over a flood of new customers who can't tolerate breathing poisoned air and smelling like an ashtray their entire trip. But I digress.

Crossing Over To Another Stream

As conferences go, the Connections conference brought in about 4,500 developers who crossed the Visual Studio, SQL Server, ASP, and Windows Mobile technologies. While the attendees were "encouraged" (by the fees they paid) to stick to one track, many developers seemed to be crossing over between sessions. That's understandable; there is just so much ASP that anyone can take.

I got lots of interesting and insightful questions from some of these folks who wanted to stretch their skills into other areas. It's a challenge that all developers need to take on. If they don't continue to learn new technologies, they become less and less useful to the team.

Another high point at the convention (at least for me) was that my "Hitchhiker's Guide to Visual Studio and SQL Server (7th Edition)" was the best-selling book at the conference. My publisher (Addison-Wesley) was able to drive their squirrels a bit harder to reduce the time to print from seven months to five months. It's no wonder that so many technical book authors are so frustrated. We (Peter Blackburn and I) also published our new ebook "Hitchhiker's Guide to SQL Server 2005 Compact Edition." It remains to be seen if this is a better way to get current information to the developer community; we hope so.



WILLIAM (BILL) VAUGHN

AUTHOR

William (Bill) Vaughn is an industry-recognized author, mentor, and subject-matter expert with more than 30 years in the computing industry as a developer, manager, trainer, marketer, and writer. After 14 years at Microsoft, Vaughn stepped away to work on his new books, in addition to mentoring and leading training seminars. He's written six editions of the "Hitchhiker's Guide to Visual Basic and SQL Server" and two editions of "ADO.NET and ADO Examples and Best Practices for Visual Basic Programmers." He and Peter Blackburn just finished "Hitchhiker's Guide to SQL Server 2000 Reporting Services."

Reporting Services: A New Beginning?

When I got back in town, I spent a day at PASS (Professional Association of SQL Server) and sat in the "Ask the Experts" areas answering questions posed by Reporting Services developers. Many of the Microsoft Reporting Services team sat at the table with me and provided their spin on the issues. These interactions are really good for the Microsoft teams. They get to hear from real people trying to solve real-world problems, not just hypothetical scenarios they use when they design the product.

More than one customer asked for a Rich Text control to render formatted text in a report. Apparently, the feature to support this was cut, so neither Microsoft nor third parties can provide an add-on RTF control. It was also interesting to hear the Microsoft team explain how Reporting Services works (or doesn't) and how they plan to completely revamp it in the "Katmai" time frame. (Katmai is the code word for the next version of SQL Server.) They say it will arrive in 2008; I have my money on closer to 2010 given what they have put on their plate. I encouraged them to figure out how to support both existing RDL reports and the new report definition language they're inventing, come up with a really good translator, or find somewhere in the South Pacific to hide.

Actions & Unintended Consequences

Apparently, the problem Microsoft and Reporting Services developers are facing is that the rendering engine doesn't. When one works with a Windows Form or an ASP page, one expects the user to see what the developer sees when the program is executed. The same goes for reports—WYSIWYG. Given that the users like to view their reports in their own browser or export their reports to PDF, TIFF, or other nonbrowser formats, the rendering engine must somehow transmogrify the report so it looks the same as it did when originally developed. This is an especially tough nut to crack. And, no, I'm not talking about the issues associated with that "other" browser (Firefox).

I expect the conversion to the new Reporting Services engine will have a number of unintended side effects, even if the RTF conversion is totally transparent (which I really don't expect). For example, Peter and I were on the verge of updating our Reporting Services book ("Hitchhiker's Guide to SQL Server 2000 Reporting Services"), but if Microsoft is about to retool the Reporting Services engine (tantamount to switching from coal to gas), we can't afford to spend six to eight months writing and five to seven months printing a book that won't last more than 12 months before it's obsolete. Ironically, while our book was originally written for the SQL Server 2000 implementation of Reporting Services, in my humble estimation, about 90% of it still applies today. Perhaps we'll update it with a set of ebooks. Anyone interested?

Send your comments to bill@processor.com

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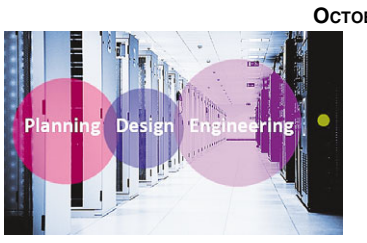
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Server Quietization

Reducing The Hum Of Servers Without Sacrificing Quality

by John Brandon

• • •

THE HUM OF A SERVER is a sign of two things: that there's a tremendous amount of power inside the enclosure, and that the fans are working overtime to make sure there are no excessive heat problems, which can cause crashes—or worse. Yet for anyone who works in a smaller data center or even keeps a row of servers close at hand in an office cubicle, server hum can be distracting and make it hard to hear when talking on the phone, for instance. Not every data center is situated in a server room where you can occasionally check on system status and run admin utilities. Instead, you might have a server right under your desk.

Quiet Down!

Server quietization is one of the key issues for small to midsized enterprises, a problem that a larger enterprise rarely needs to address. For the most part, the issue has become more noticeable as power output has increased and data centers rely on more and more servers to run the business. Server manufacturers use several methods to make servers operate as quietly as possible.

Fan placement, low-decibel fans, heatpipes, watercooling, and optimized airflow inside the chassis can all help reduce noise. Fanless systems, which are much more expensive and use an array of heatsinks, heatpipes, and other cooling methods, also provide an innovative approach.

"Small to medium-sized companies tend to utilize tower-based platforms that are often colocated with employees, so noise levels can greatly affect productivity in these environments," says Christina Tiner, group manager of Industry Standard Server product marketing at HP (www.hp.com). "Mechanical designs of the servers greatly impact acoustics. Fan location and airflow patterns determine the amount of air required to cool the system."

"The latest trend is to make sure that the air path from the front of the system to the processor is as clear as possible," adds Ken Haugen, the director of server engineering at Gateway Computers (www.gateway.com). "Any active component other than a fan in that air path will preheat or slow down the air path, forcing the fan to run faster to keep the processor cool and make more noise. Other trends in keeping servers quiet include counter-rotating fans, thicker and slower fans, and larger processor heatsinks. Finally, the latest-generation processors use much less power than previous generations, which decreases the thermal load and allows the system to run quieter. Some manufacturers also use liquid cooling, but this adds too much cost for most applications and is less reliable."

Server quietization is one of the key issues for small to midsized enterprises, a problem that a larger enterprise rarely needs to address.

Haugen notes that companies that situate servers near employees should look for server manufacturers that design quiet servers, relying on low-decibel fans and highly optimized CPUs that are designed for whisper-quiet operation. He notes that some server rack manufacturers have designed cabinets that use sound-dampening techniques, but the heat output and power drain for these cabinets sometimes negates their value.

The Marketplace For Quiet Servers

One company that specializes in quiet servers is eRacks Open Source Systems (eracks.com), which offers products designed for smaller companies that may not have a server room. There are two main product offerings for low-decibel servers: those with a fanless design that are fully silent and those that are quietized with optimally placed, low-noise fans.

"Placement and location of internal fans is key, and we select and specify only certain chassis designs which meet our criteria for fan placement and location to avoid or minimize auditory noise leakage from the chassis," says Joseph J. Wolff, eRacks' CTO and founder. "We also use only the best available noncontact fan technology, and at the lowest fan RPMs possible, to drastically reduce the noise produced by each individual fan, usually to about 1/10 of the original decibel level output."

Nixsys (www.nixsys.com) is another company that has received customer requests for fanless and low-noise servers. Nicolas Szczedrin, a Nixsys spokesperson, says the requests sometimes come from small multimedia companies and recording studios that require servers with high processing power, yet the companies don't want to disrupt any of their daily activities. He says one partial solution is to use a chassis for a server that can automatically regulate fans for low-decibel operation, but he says the trade-off is in the extra heat buildup.

"We have had more acceptance with quiet fans because they are very quiet, and if they are well-designed and tested properly, you can use a very large range of processors and components, making the systems more powerful, easy to upgrade, and lower cost," Szczedrin says.

Shuttle (www.shuttle.com) also makes systems that operate at low decibels and can be used as servers. Its XPC-SB83G2B system uses a silent power supply, an "integrated cooling engine" to manage airflow, and fans that change their speed depending on the processor requirements. Shuttle systems have the added advantage for smaller companies in that the chassis is remarkably small.

Server Or Rack Issue?

Most server manufacturers agree that quietization is mostly a server issue, not a rack issue. If the server itself is noisy, sound-dampening racks typically just obstruct airflow. Some companies, such as NEC (www.nec.com) and eRacks, do have rack-mountable servers that use liquid cooling, so they operate in near silence. These liquid-cooled, rackmount servers are typically more expensive but operate at the lowest decibels possible.

According to eRacks' Wolff, "We can centralize the pump, tank, and cooling infrastructure for a rack of multiple servers using manifold technology."

In the end, running a quiet server has many benefits for smaller companies. It means a server room is less of a requirement down the road, and admins can keep systems in the same office and have easy access to server utilities and monitoring software.

Quiet Servers

Product	Features	Price	Web Site
Gateway E-9422R	• Air path travels from front to back over the processor and uses BTX design • Uses 120mm fans for quieter operation • Uses a baseboard management controller for fan speed throttling	Pricing varies by configuration	www.gateway.com
HP ProLiant ML350 G5 1.86GHz LFF	• System-level fan design with various sizes, speeds, and shapes • Active heatsinks that use active fan cooling and efficient materials • Chassis segmenting, airflow control, air baffle enhancements, and fan positioning	$1,679	www.hp.com
Nixsys Silencer Kit For AMD Opteron Servers	• Uses silent power supply • Silent speed-controlled CPU heatsink • Quiet-operation chassis fan	$99 for single core; $199 for dual-core	www.nixsys.com

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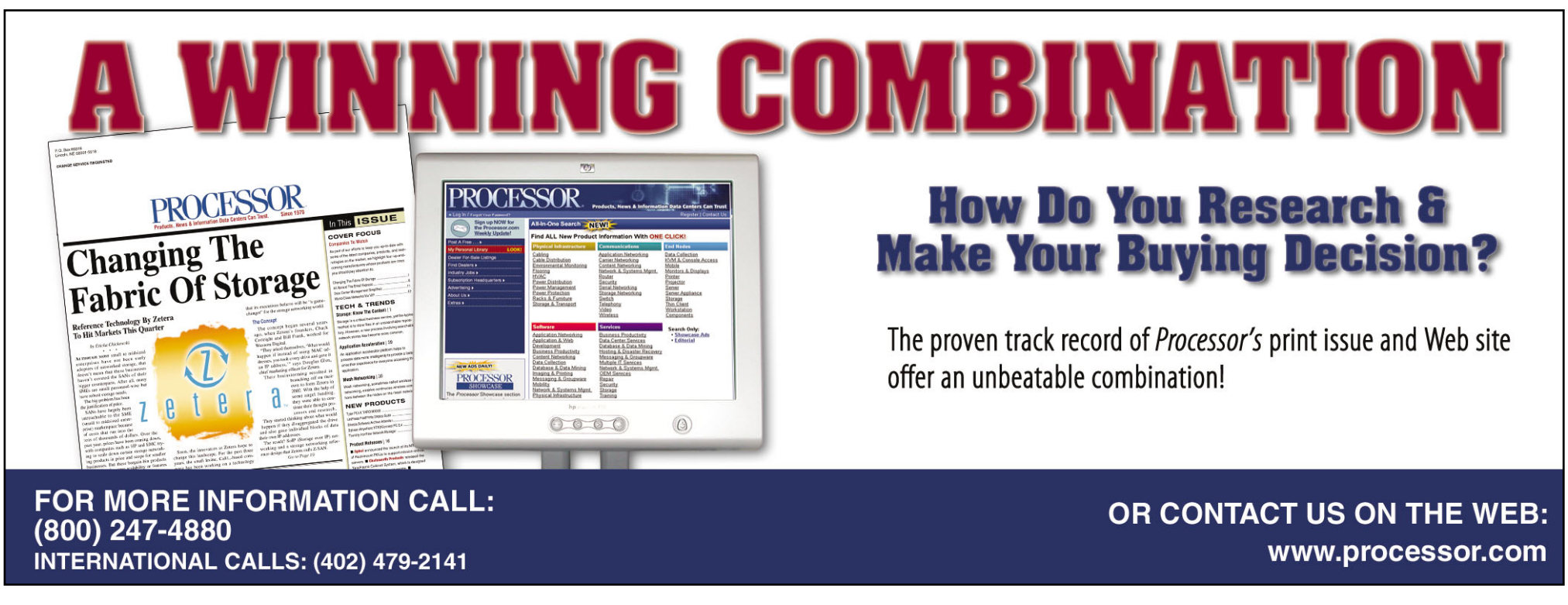
eRacks Open Source Systems eRacks/LITE
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www.Processor.com/eRacks

GizMac XRackPro2
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NIXSYS Open Systems Silencer Kit
NIXSYS now offers a "Silencer Kit" option that makes its servers virtually silent
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Quietization Methods

- Fan placement inside the chassis
- Fans that adjust their speed based on CPU cycles
- Fanless systems that use heatpipes or heatsinks
- Liquid-cooled systems that operate at near silence



Surviving A Crash

How Drive Imaging Software Can Aid Disaster Recovery

by Sandra Kay Miller

• • •

Disasters come in all shapes and sizes. From the virus attacks to flooding and fire, the bottom line is when the computer quits working, so does the user. In today's business world, especially for organizations that exist entirely online, an outage can lead to substantial losses, including that of the business entirely.

According to Maeve Cummings, Stephen Haag, and Donald J. McCubbrey, authors of "Management Information Systems for the Information Age," organizations routinely spend up to 25% of their budgets on disaster recovery plans. While this figure may appear high, keep in mind that out of all companies that experience a major disaster in which their data is lost, 43% never reopen, 51% close within two years, and only 6% continue to operate for the long term.

For smaller organizations, disaster recovery solutions, such as BrightStor ARCserve from CA (www.ca.com), VeriSign Disaster Recovery and Business Continuity solutions (www.verisign.com), tape drives, and offsite backup facilities can be costly to install and maintain. A viable alternative is drive imaging software, which has existed since the days of DOS.

Drive imaging software has matured into a technology capable of delivering an affordable disaster recovery solution through new features such as centralized administration, network capabilities, security, support for multiple platforms, and granular control over backup and restoration options.

There are numerous solutions on the market, including many freeware utilities for drive imaging. However, organizations that depend on their data would be wise to stick with commercial products that have undergone extensive QA testing, as well as those that offer technical support and are specifically designed for a networked environment.

Initially designed for the desktop, drive imaging solutions have grown to include options for networked workstations and servers and multiple platforms and have added security features such as encryption, storage management, and drive wiping.

Out of all companies that experience a major disaster in which their data is lost, 43% never reopen, 51% close within two years, and only 6% continue to operate for the long term.

Timing Is Critical

"Businesses are realizing that backing up their systems is just one step in being prepared for a disaster. In a real disaster situation, quick recovery of business-critical data is crucial," says Acronis CEO Walter Scott (www.acronis.com).

Recognizing this, the True Image solution from Acronis includes the capacity to create exact replicas of both servers and workstations, perform bare-metal restores within minutes, back up and restore individual folders and files, and provide centralized administration.

Unlike early drive imaging software that only allowed a full image to be copied to a parallel hard drive, you can now save images to a variety of locations, including virtual machines, networked hard drives, FTP servers, USB flash drives, or even

Go to Page 28

Product Rundown

Product	Features	Price	Web Site
Acronis True Image	Images can be saved to an existing hard drive, FTP site, or virtual machine on the network as well as burned to DVD without third-party burning software	Enterprise Server: $999 Windows or Linux Server: $699 Workstation: $79.99	www.acronis.com
Addlogix SnapShot	Extremely efficient; uses minimal resources, including dynamic space management, to offer a wide variety of backup and restoration options	$44.99	www.addlogix.com
Faronics Deep Freeze	Provides a baseline computer configuration upon restart, regardless of the changes that have been made during the previous session	Windows version: $29.95 Mac ARD version: $44.95	www.faronics.com
Norton Ghost	The latest version includes encryption for more secure backups and the "Back Up Now" feature, providing single-click backup	$69.99	www.symantec.com

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Automated Architecture

Tips For Monitoring Building Systems

by Douglas Schweitzer, Sc.D.

• • •

Some already overtaxed IT managers are being pushed yet further in the interest of remaining within the limits of company financial constraints. Not only are managers responsible for their technology staff and data centers, but they're increasingly finding themselves in positions that can be likened to hall monitors—in this case, more like entire building monitors. For the data center manager, this means a wide array of the building's systems (such as heating, cooling, lighting, various sensors, fire, and safety) and security are part of the focus of his monitoring.

The Intelligent Building

Many tools are available to aid managers with this responsibility, not the least of which is what's considered the "intelligent building." Paul Ehrlich, professional engineer, says the intelligent building employs "use of technology and process to create a building that is safer and more productive for its occupants and more operationally efficient for its owners."

The trend for small to midsized enterprise data centers is for managers to have access to building information via a hosted Web client. According to Rodman D. St. Amand, director of strategic accounts at Tour Andover Controls in Massachusetts (www.tac.com), the Web client "provides the end user with access to specific information related to their space. The use of the Internet allows the supplier of content to spread the cost of the front-end server. Using the Internet also allows the customer access to information anytime and anywhere they have Internet access."

St. Amand explains that today's BMSes (Building Management Systems) can access and save tremendous amounts of historical data related to mechanical and electrical equipment—equipment that is crucial for proper operation of data centers running 24/7. Managers need access to the BMS data to determine the cause and effect of failed equipment, instantaneous alarming, and future analysis for equipment that they may require for later expansion.

Tools For Integrating

While integrating the BMS can be complicated, many solutions are available to the SME (see the "Tools Of The Trade" sidebar for examples). According to John J. McGowan, president of Energy Control (www.energyctrl.com) and a contributing editor at automatedbuildings.com, "Over the last two decades, with deregulation of electricity and the availability of sophisticated software packages, the concept of integration is expanding to encompass the management of energy demand in the building, energy supply to it, and energy information documenting the entire process. Numerous Web-hosted and standalone tools are hitting the market for this purpose, and a key requirement for much of this technology is access to data from the EMS [energy management system] and even control of equipment connected to the system."

Cam Rogers of RLE Technologies (www.rletech.com) notes that "signals available for BMS integration include, but are not limited to, Modbus, JBus, BACnet, LonWorks (and other proprietary signals available from the equipment manufacturers). On the other hand, IT generally works with SNMP integrated into a Network Management System (NMS)."

Rogers notes that the problem that faces those who are trying to integrate building systems into their network is the lack of a standard protocol for signal conversions. In order to capture information and alarms that are available from critical equipment, the signals must be converted to SNMP. According to Rogers, "That plays a major role in why RLE is forecasting a 25% growth in 2006." RLE's Falcon products are designed to be integration-friendly for both NMS and BMS systems, converging signals and allowing information to be relayed to the appropriate management systems.

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Tools Of The Trade

Before your data center's IT staff embarks on taking control of critical building systems, they'll need an understanding of the hardware and software tools available. Here is a brief list of some popular manufacturers in the industry.

Manufacturer	Description	URL
Computrols	A leader in automation systems for large facilities that designs, manufactures, and services cutting-edge automation systems throughout the United States and the world	www.computrols.com
CrossTalk Automation System By CW Industries	Gives the data center the ability to link several major facility systems and then view them via a standard Web browser	www.cwindustries.com
Honeywell	Offers customized solutions to help simplify facility management, making your building safer and more cost-efficient with its range of automated building products and services	www.honeywell.com
Johnson Controls	Its Web-based software application called the Green Compass tool (www.mygreencompass.com) is designed to simplify and expedite the Leadership in Energy and Environmental Design certification process	www.jci.com

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Surviving A Crash

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CD/DVD without the use of third-party disk-burning software.

Automation & Security

While images of both server and workstation drives are a big step toward restoring business continuity in the event of a disaster, left unsecured, those same files pose a huge security risk that could lead to a different type of catastrophe—theft or tampering.

Norton Ghost (www.symantec.com) has been a heavyweight in the imaging market for the last decade. Over the years, Ghost has grown to include the ability to handle NTFS partitions, compress images, and attach passwords to protect images.

Building on the requirements for security, Symantec has integrated encryption into the latest release of Norton Ghost. This lets organizations bound by regulatory compliance meet stringent data protection requirements without spending a lot of money on expensive encryption technologies for backup files.

Another area in which Norton Ghost shines (as with all of Symantec's products) is with automation and ease of use. Novices (read: small companies with no IT departments) can easily install and set up Norton Ghost for regular automated backups to practically all media, including CD-R/RW and DVD±R/RW drives, USB, and FireWire devices. Restoration and managing images is as simple as using a standard file management tree. However, note that Norton Ghost only supports Microsoft operating systems.

Dynamic Data

In most environments, data is constantly changing. This means that the backup image created last week or last month may be dramatically different from the one made yesterday.

Addlogix SnapShot (www.addlogix.com) is an imaging product that allows users to create and manage "snapshots" of their systems. Using only a fraction of resources for images, users can save multiple images without depleting storage space.

What sets Addlogix apart from other imaging software is its ability to save or move files in a current snapshot to a previous snapshot during a restoration. Using the Advanced Data Synchronization feature, users can manually choose existing files to be transferred to a restored image.

Perpetual Recovery

Unlike imaging solutions that are constantly updated, Faronics Deep Freeze (www.faronics.com) maintains the status quo for drive images regardless of the changes a user makes to a workstation. Each time the system is rebooted, the entire drive is restored to the original state.

An excellent choice for environments where multiple users work on a single workstation, such as public machines and educational institutions, Deep Freeze rids all traces of malware, private user settings, unwanted applications such as P2P, chat, and games, as well as data.

Faronics supports both Microsoft and Mac platforms, with future plans for a Linux edition. There are two versions, Standard and Enterprise. The Enterprise version provides centralized management as well as advanced features for security and configuration.

Whether your computer has fallen victim to the whims of Mother Nature or the dreaded Blue Screen Of Death, drive imaging software can provide an affordable and easy disaster recovery solution.

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Acronis True Image
Complete server backup, providing organizations with the most comprehensive, reliable, and cost-effective server protection
www.Processor.com/Acronis3

Addlogix SnapShot
Lets users create snapshots of the computer system and data at different times; users can then select a specific snapshot to recover files or restore the entire system
www.Processor.com/SnapShot

Powerfile Active Archive Appliance
An easy-to-install, nondisruptive appliance that comes with all of the components required for archiving high-value fixed content; is removable for offsite data storage
www.Processor.com/Powerfile1

StorageCraft Shadow Protect Desktop Edition
Creates an exact online backup of your entire system, including the operating system, applications, personal preferences and settings, and critical data
www.Processor.com/StorageCraft2

Automated Architecture

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Food For Thought

It should be noted that not everyone agrees that responsibility for monitoring the systems in use in a company's buildings is increasingly being put on the shoulders of the data center.

According to Dale Sartor, applications team member of the Environmental Energy Technologies Division at Lawrence Berkeley National Laboratory, "That sounds like somebody thinks data centers and data center operators are at the hub of an EMCS [Energy Management and Control System]. Perhaps the idea stemmed from the increased use of the Web for EMCS information transfer, thus potentially passing data through servers in the small and midsized enterprise data center. Or perhaps it stemmed from the need for data center operators to have a better understanding of the HVAC systems serving their center."

Wherever he believes responsibility for monitoring lies, Sartor does note that "perhaps the single biggest thing to look for when monitoring a building is to confirm its systems get turned off or reset during unoccupied hours."

Integrating The BMS

Rogers says, "The convergence of IT and facilities is not an easy process. Historically, critical equipment has been monitored by facilities utilizing a BMS." The goal of the smart building is not only that it runs efficiently but also that it is able to do so with a smaller staff and at a lower long-term cost.

According to Ken Sinclair, owner at automatedbuildings.com, "These technologies promise to convert building operation and maintenance from highly reactive and unplanned to proactive with highly targeted actions based on information about the actual status of the building systems. In the long run, many problems will be self-corrected by the systems themselves."

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All About Support

Servers Direct Caters To Your Needs

by Robyn Weisman

• • •

LOOKING FOR A SIMPLE white-box 1U rack-mount server? Servers Direct (www.serversdirect.com) has that. Need a blade server with dual Intel Xeon processors, SCSI drive bays, a blade storage expansion module, and three years of onsite warranty service? Servers Direct has that, too. CPUs, switches, network cards, monitors, hard drives, cooling fans, memory, and backup drives? Check to all of these and more.

In fact, you could say that Servers Direct is the IT administrator's equivalent to a superstore such as Amazon.com, except that, unlike Amazon, you can configure Servers Direct's endless array of server and storage choices in seemingly countless ways. And you get, at minimum, a one-year standard depot warranty, in which devices and parts are fixed at one of Servers Direct's facilities rather than having to send the malfunctioning part to the manufacturer.

To top that off, Servers Direct offers a host of warranty upgrades, including its 24-hour Express Service for onsite, depot, and even cross-ship warranties and its "no-fault" warranty, which according to its Web site, "covers unintended drops, liquid spills, power surges, and any unintentional damage to your Servers Direct product."

Support Is Key

Joe Toste, vice president of sales and marketing at Servers Direct, says that his company's line of service offerings is a key differentiator from its competition in the servers and parts reseller space. "Let's be frank. There are a lot of companies selling products [like ours]. The real cost for a customer is post-sales support, and we are committed to offering that. Our motto is that service is first, and we continue to expand our business based on the principle of ensuring this high-quality service," he explains.

According to Toste, Servers Direct's superior support is a combination of employing expert people and the right Web technologies. "We are an online business with strong brick and mortar values," Toste says. "As our business grows, we find that more and more people want answers immediately, and the best way to support them is to make use of the Web."

Toste cites several examples of leveraging Web technology to interact with and service its growing customer base, including increasingly more precise product and ordering information, order tracking, and RMA (Return Merchandise Authorization) processing.

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Toste adds that Servers Direct's equally dizzying array of target markets—from individual end users to independent software vendors that package Servers Direct's offerings as part of their complete solution—buy from Servers Direct because of the company's specialized expertise in x86 servers and systems. "All these target markets are seeking information, products, price, and service from us because we position ourselves as the online experts for Intel [www.intel.com], AMD [www.amd.com], and Supermicro [www.supermicro.com] server technology. We believe that they prefer to work with experts," says Toste.

Toste goes on to explain that Servers Direct's target market has evolved as trends such as Web-centric server computing have increased the deployment of small-scale data centers in markets that previously had not had a server farm.

Expanded Offerings

The engineers who founded privately owned Servers Direct had had years of experience deploying and maintaining a wide range of server setups in data centers. According to Toste, the founders realized that the market for white-box servers needed faster, better, cheaper, and easier service. To meet the needs of this marketplace, Servers Direct started out offering basic 1U and 2U rack servers for the data center, while focusing on providing great service.

Since the company's founding, Servers Direct has expanded into blade servers and HPC (high-performance computing) clusters, along with advanced white-box storage products such as SANs. "I believe that technologies like HPC, blade servers, and SAN will become increasingly more mainstream, [which is why] we are already offering these solutions and intend to offer a broader selection of these products in the future," Toste says.

One of Servers Direct's more popular configurations is a 4U server with 2TB of SATA RAID storage, although the company offers server configurations as high as 8U. "The decision between 8U and 1U really comes down to the cost of managing the server [because] more [1U] servers can make it more complicated to manage a data center. On the other hand, an 8U server risks bringing more users down if there is a failure. In other words, each has their merits," Toste says.

Meanwhile, Servers Direct's customers are benefiting from the ongoing competition between Intel's and AMD's processors. "We are seeing unprecedented improvements [in] performance per watt technology that is offering a very compelling reason for a customer to refresh their servers," Toste says.

The move to 64-bit computing environments is "inevitable," according to Toste. In addition, Servers Direct is focusing on providing its customers with Intel Quad Core Xeon and AMD Opteron solutions that support advanced virtualization functionality from vendors such as EMC subsidiary VMware (www.vmware.com).

Virtual Challenges As A Driver

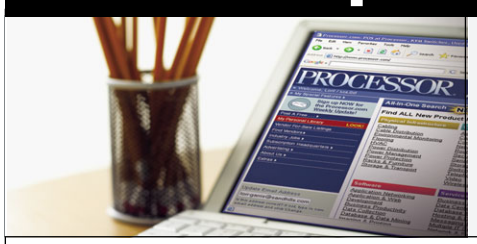
Toste says that the trend toward virtualization will be huge because "the trend in the market is toward more server-based applications, but most data centers do not have the room or capacity to accommodate these applications" in a conventional server setup.

As a result, virtualization offers real benefits to customers that hardware vendors such as Servers Direct ignore at their peril. Servers Direct, however, does not see virtualization as a threat to its sales, although it may appear to be one at first glance.

Toste says, "The growth in server-based applications and the improvements in server technology and performance will continue to drive a lot of hardware sales, and I believe customers will want to work with partners that sell qualified systems that have been validated for virtualization and have the expertise [to support them]."

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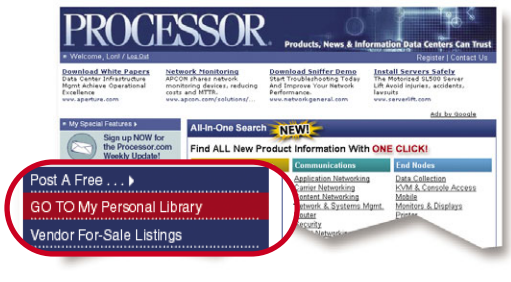
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